

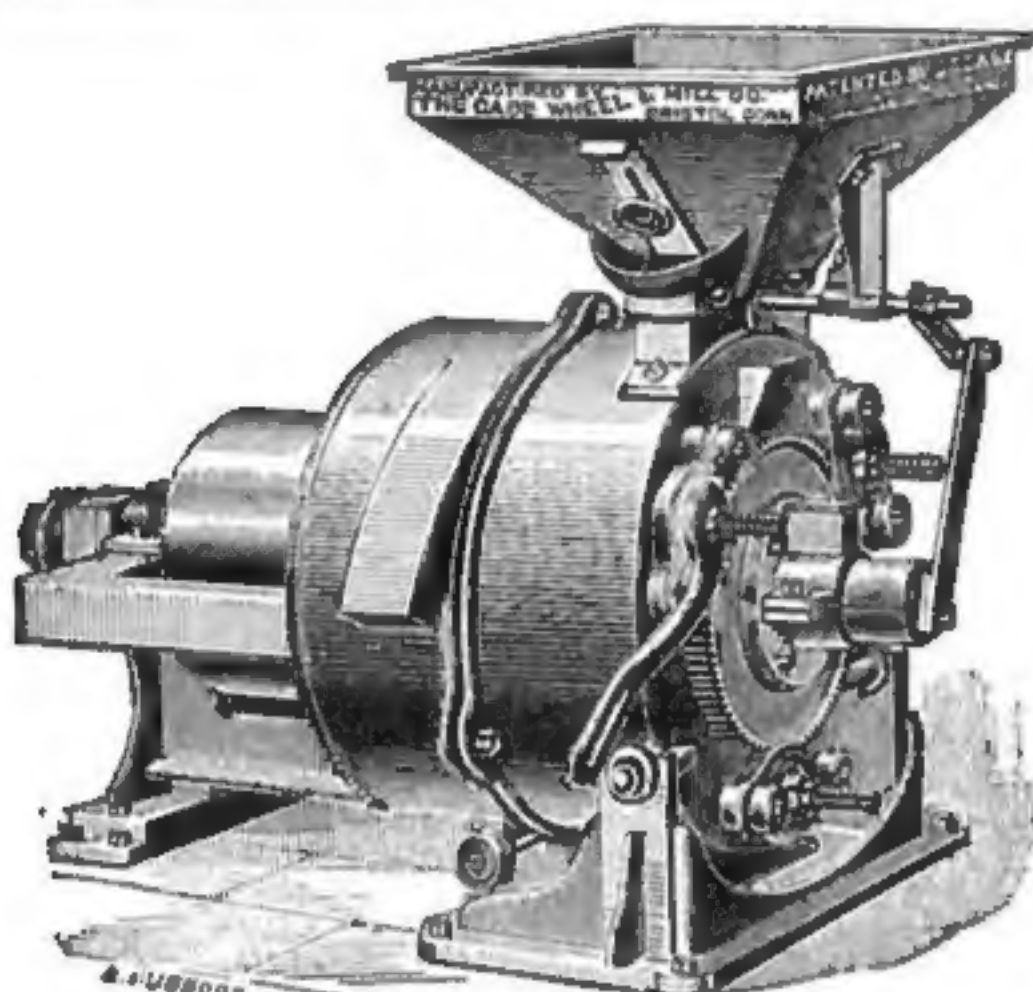
CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY MORNING.

VOL. XX. No. 22.

BUFFALO, N. Y., JULY 29, 1889.

\$1.50 PER YEAR.



VICTORY OVER ALL OTHERS. SINGLE & DOUBLE VERTICAL GRINDING MILLS.

(J. T. CASE'S PATENT.)

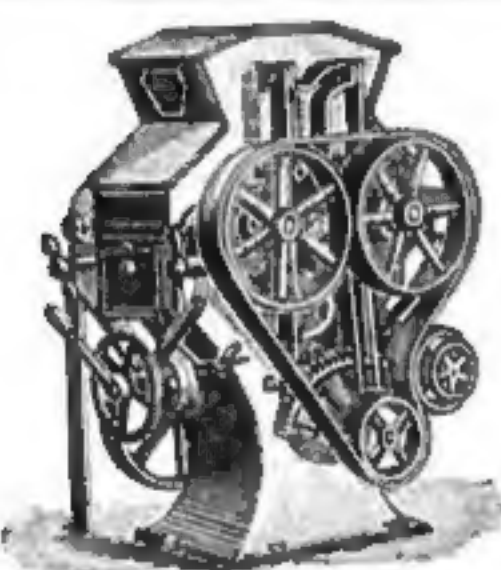
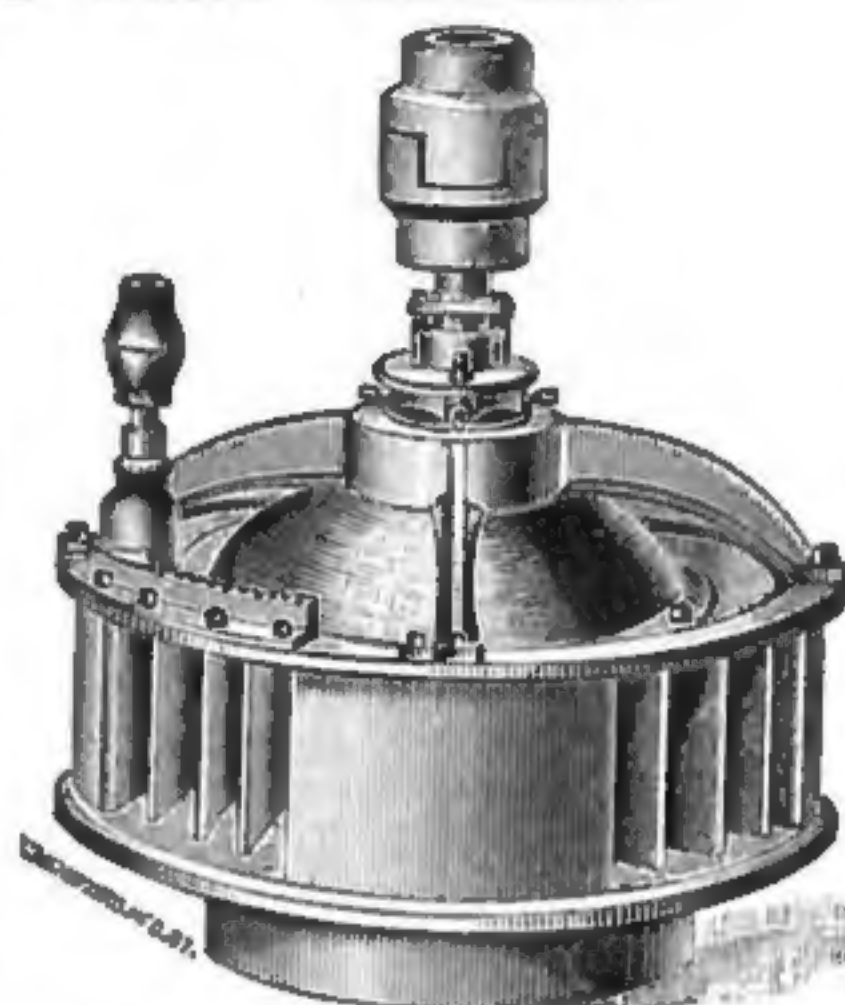
FACTS ARE MIGHTIER THAN ASSERTIONS. READ WHAT THEY SAY:

"Our 20-inch mill made by the Case Wheel & Mill Co. is in every respect satisfactory, easy to handle, and best results obtained of any mill in the country, with same quantity coal and power."—A. S. RUSSELL & Co., Meriden, Conn.
 "Superior to any mill in use."—Geo. WESTON, Bristol, Conn.
 "The best satisfaction in quantity and quality."—CHILD'S ELEVATOR, Manchester, Ct.
 "We take pleasure in recommending it."—GARLAND, LINCOLN & Co., Worcester, Mass.
 SEND FOR CATALOGUE—ILLUSTRATED AND DESCRIPTIVE.

The Improved National Turbine Water Wheel

The Best for Economy; The Best for Durability; The Best for Power. ONE THOUSAND FIVE HUNDRED NATIONAL WATER WHEELS IN USE Prove that our Assertions are Supported by the Leading Manufacturers in the Country. Send for illustrated catalogue and prices to the manufacturers.

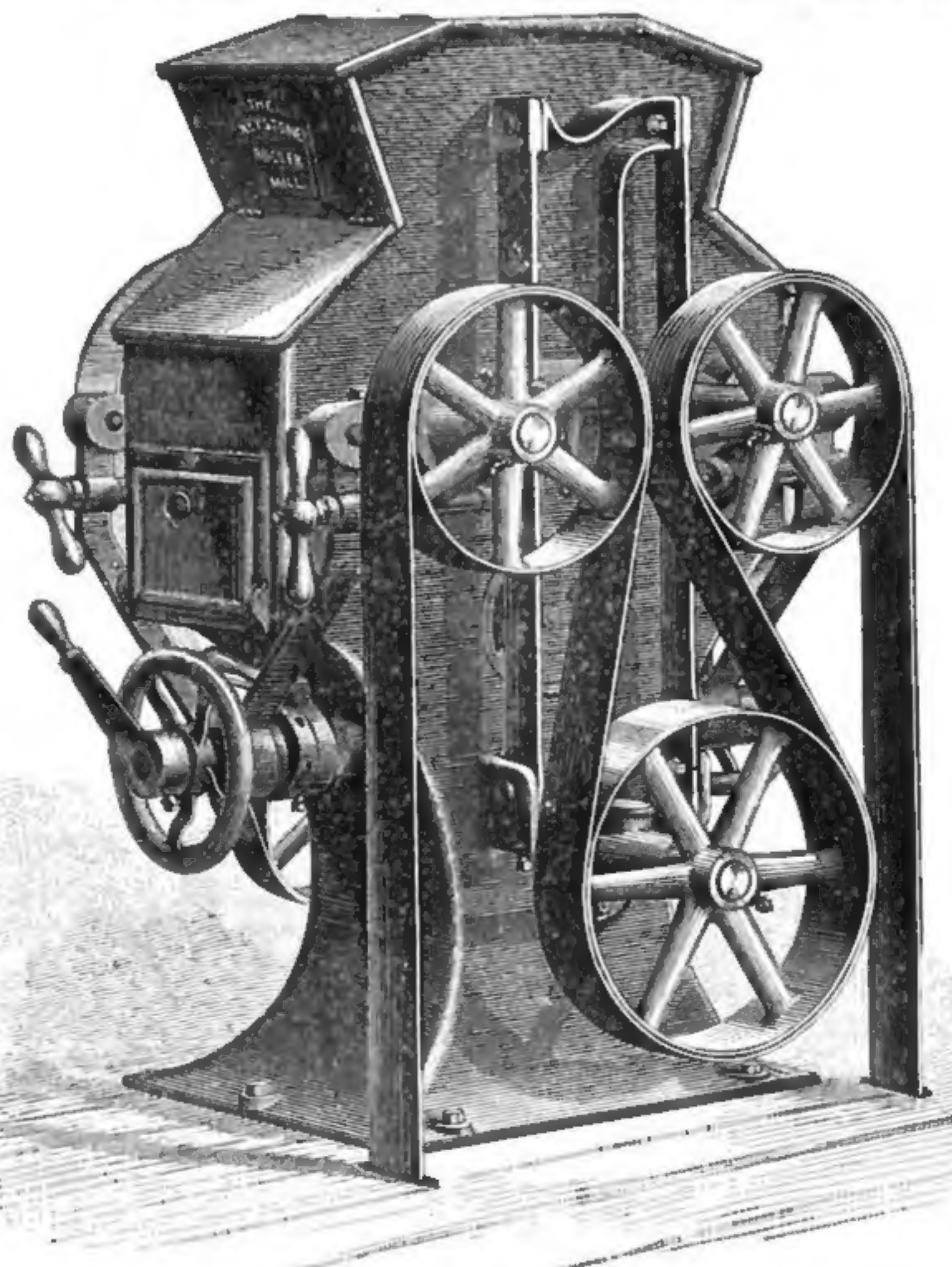
The Case Wheel & Mill Co., Bristol, Conn.



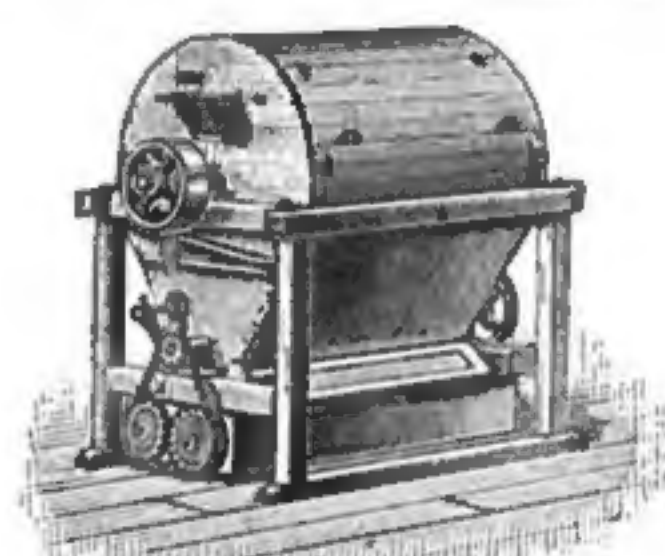
Wheat Roller Mill.

THE "KEYSTONE"

WHY IS IT THE BEST ROLLER MILL IN THE MARKET?



THE KEYSTONE FOUR ROLLER MILL.



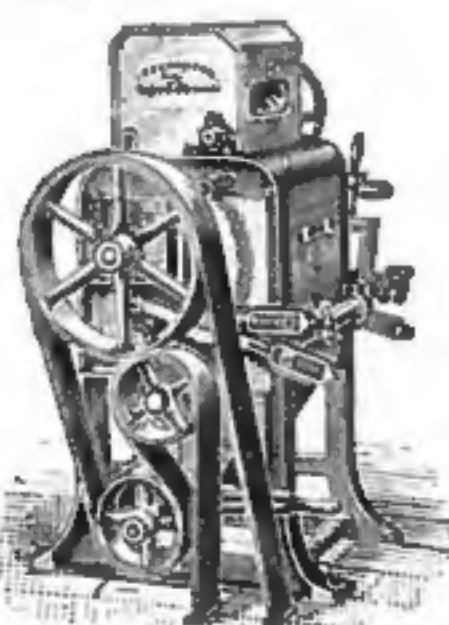
Bran Duster.

BECAUSE the adjustable roll is not pushed against its mate but is held rigidly to it, which takes out all vibration.
 BECAUSE it does 25 per cent. more work than any other roll.
 BECAUSE the heated air is taken out of the machine.
 BECAUSE it has the best feeder.
 BECAUSE it has no tremor.
 BECAUSE it has the effect of a roll without springs.
 BECAUSE it can be trammed in a quarter of a minute.
 BECAUSE you can tram either end of the four rolls.

BECAUSE it runs 25 per cent. lighter than any other roll.
 BECAUSE all bearings are universal and never get out of line.
 BECAUSE you can throw the rolls apart from either side.
 BECAUSE you can set both ends of the roll at the same time with one movement.
 BECAUSE only one spring is used for both ends of rolls.
 BECAUSE there is no slip to the differential.
 BECAUSE no dust escapes from machine, all openings being covered.

Also ask for prices on the only Noiseless Sieve Scalper, the "Allfree" Improved Purifier, "Climax" Bran Dusters, and "Allfree Flour Packer.

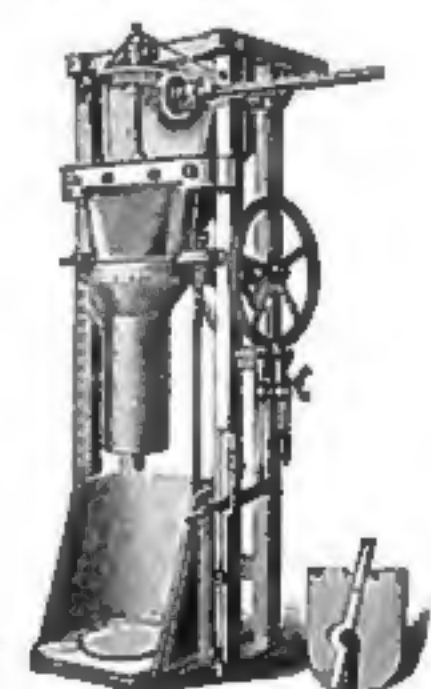
Also ask for prices on "Allfree" Centrifugal Reels, "Success" Bolter, Three Reduction Corn Mills, Latest Improved Designs.



Corn Mill.

Complete Outfits for Flour or Corn Meal Mills of any Capacity.
THE J. B. ALLFREE CO., INDIANAPOLIS, IND.

108 & 105 South Pennsylvania Street.



Flour Packer.

FIRE! FIRE!! FIRE!!!

Our entire works were destroyed by fire on the night of May 10th. Scarcely two hours after the workmen had left their day's work a fierce fire started which in less than two hours left our entire plant as complete a wreck as was ever witnessed. But like the

FABLED PHOENIX OF MYTHOLOGY

We have risen from our own ashes, and have erected a temporary machine shop above the ruins, and have it already furnished with power and new machinery for Re-Grinding and Re-Corrugating Rolls, together with Lathes and other machinery for doing general machine work. We have leased some Large Railroad Shops and an Extensive Wood-Working Factory so that we are now building Case Roller Mills, Purifiers, Inter-Elevator Flour Dressers and all our other machinery nearly as fast as ever.

OUR PATTERNS WERE SAVED

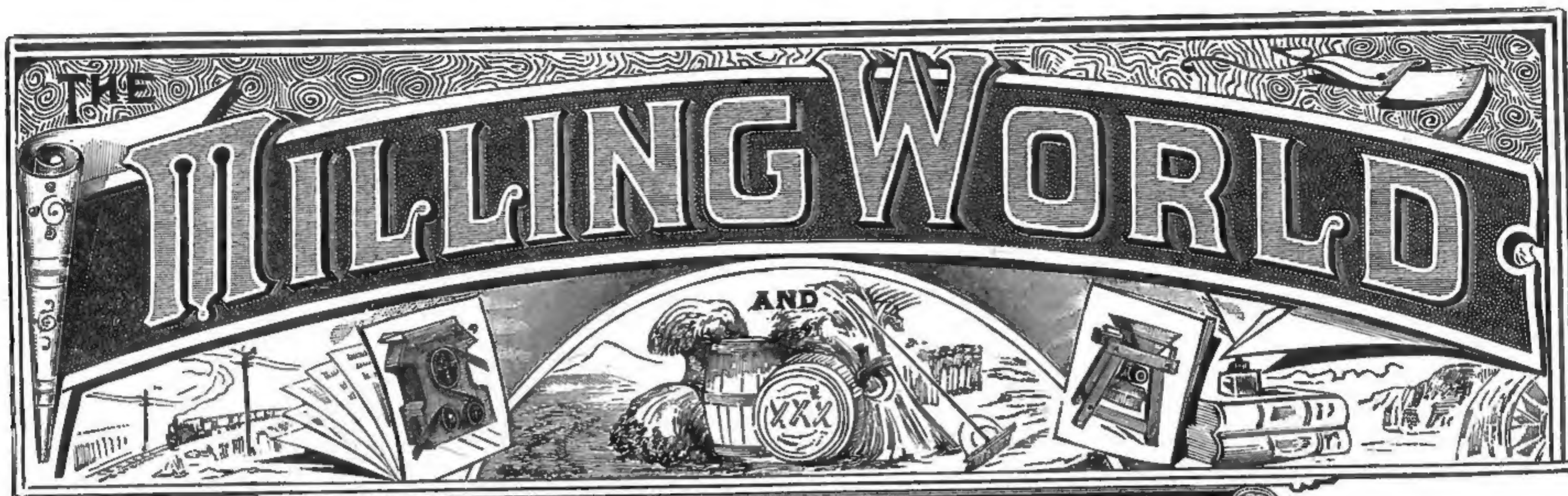
Also all our Plans, Flow Sheets, and the Records of our Business.

NEW AND EXTENSIVE WORKS

Will be erected at once on a large building site just purchased, and we intend to make our shops when completed the most convenient and best equipped plant in the country. We expect soon to get caught up with our orders, and will be in shape to contract for new work at an early date. We hereby tender our sincere thanks to our many friends for their letters of sympathy and good will, and also to those who have been patiently waiting for their machines until we could get in shape to make them. We assure all our friends that we shall still be in the field with Case machinery, and will be glad to answer all inquiries the same as ever, for we are still doing business at the old stand.

THE CASE MFG. CO., COLUMBUS, O.

PLEASE MENTION "THE MILLING WORLD."



CHRONICLE OF THE GRAIN AND FLOUR TRADE
PUBLISHED EVERY MONDAY MORNING.

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BUFFALO, N. Y., JULY 29, 1889.

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THE corn crop promises to yield at least 1,975,000,000 bushels this year, and greatly improved weather may send the total up to 2,000,000,000 bushels. Last year the crop was 1,987,000,000 bushels. Of course, very bad weather may yet come and shorten the yield, but the probabilities point to a large crop of excellent quality.

FROSTED wheat sowing has probably not had a fair test in the northwest this season, as the drouth has damaged all sowings seriously. Several letters recently received from Dakota state that the plants from frosted seed did not stand the drouth so well as those from good and perfect seed. In a drouth all signs fail.

RECENT reports to the Toronto Board of Trade admit that the drouth in Manitoba and the adjoining Canadian territories has cut down the wheat prospect to only a half crop. Men who have been over a part of the best Manitoba country assert that there is not even a quarter crop in the most favored sections, while in the other sections the ruin by drouth is complete. The enormity of the disaster to the Manitoba wheat crop may be appreciated when it is remembered that the acreage, the early spring and the fine condition of the crop at the start all gave promise of a 20,000,000-bushel crop in that province. Some of the observers on the ground now think it will be surprising if the crop yields 4,000,000 bushels. The disaster does not end with the wheat. All the other crops are disastrously short, and the coming winter threatens to be a most gloomy one, both in Montana and Dakota. The people of the northwest, on both sides of the border, will in all probability need help to tide them over the winter.

OUR esteemed Canadian cotemporary, the Toronto "Monetary Times," professes to think that the Canadian millers have failed to make out their "grievance" on the grain and flour duties now prevailing in the Dominion. Looking at the situation from the Yankee side of the border, we would say that the millers have made out a most intolerable grievance, or else figures lie and the English language has ceased to mean what it seems to mean. They have shown plainly, beyond dispute by sane or sensible persons, that the present duty on flour and grain discriminates against Canadian flour and in favor of American flour by over 20 cents a barrel, and that American competition is crushing Canadian milling. That is a decided grievance, it would seem, and it is a grievance that could be at once righted by re-adjusting the duty on grain imported or on flour imported. That the Macdonald government refuses to acknowledge the grievance is not proof that the millers have failed to make its existence plain. That other things have conspired to depress Canadian milling is not a good reason for saying that the duty grievance has not been made out. Our Toronto cotemporary is hardly fair to the millers of Canada. It should remember that, if the Manitoba wheat crop is a failure, as it now seems to be, and the American wheat crop is abundant, as it beyond doubt is, the coming year will see the present Canadian milling depression so intensified that the flouring-mills of the Dominion will be forced to shut down, unless the grain and

flour duties are equalized. Does it wish to see the Canadian milling industry flattened out under American competition?

THE Manitoba wheat crop is now said to promise about half as large a yield as the crop of 1888. Just what the yield of wheat in Manitoba in 1888 was no one seems to be able to show. It was probably less than 3,000,000 bushels. Should this season's crop amount to only half that figure, or 1,500,000 bushels, Manitoba will receive a blow from which it will not recover in ten years, even should every season of the ten prove reasonably favorable to crops. Some Canadian crop writers put down the acreage sown to wheat in Manitoba this season at 750,000 acres. If the total yield turns out to be 1,500,000 bushels, will the Canadian boomers be willing to have it heralded abroad that "Manitoba wheat lands averaged only 2 bushels to the acre"? That would be just as reasonable, and just as unreasonable, also, as the Canadian boomers have been in speaking of the average yield of wheat in the United States. They have divided the total crop by the total acreage, leaving the uncut areas in, and they have published the average obtained that way as the measure of the capacity of American wheat lands. Now they have a chance to show their faith in that method of making averages in their treatment of the Manitoba situation. Let us see whether they will figure out Canuck averages as they figure out Yankee averages.

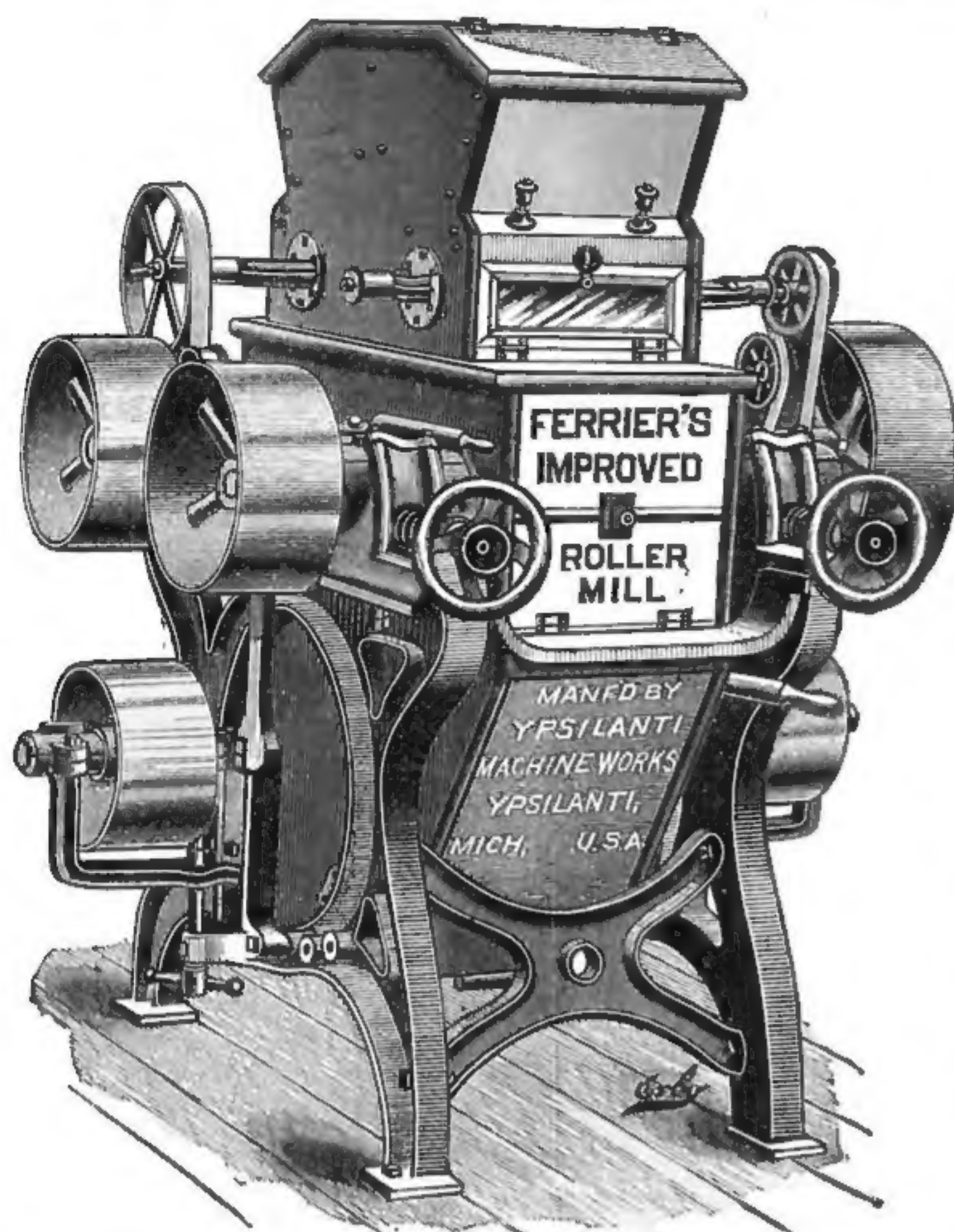
THROUGHOUT the inhabited world the past ten months show a remarkable record for wonderful variations in climate, for serious drouths, for devastating floods, for great insect pests and for intensity in all the conditions affecting the food crops. In the Southern Hemisphere the summer season was one of extremes in nearly every form of disadvantage, and Australia, the Argentine Republic, Chili and other wheat-growing lands came out with very short crops of very inferior grain. As the crop season moved into the Northern Hemisphere, all the bad conditions accompanied it, and India sank to famine notch in her wheat crop in some important sections, Russia met disaster in place of the magnificent crops she has garnered for two successive years, Austro-Hungary is said to have a crop of wheat too small for home needs, and all Europe east of central Germany seems to have suffered. In North America drouth has cost Dakota 30,000,000 bushels of wheat, and probably Manitoba has lost another 10,000,000 bushels, or even more. The only exception to the general loss in the Southern Hemisphere appears to be New Zealand, which has a good crop. In the Northern Hemisphere the exceptions to the general disasters of the year are the United States, outside of Dakota, England, France, Spain, Portugal and western Germany, in which countries the wheat crop is either average or abundant. On the whole, there is a considerable shortage in the world's production of the great bread grain, and the United States is in a position to reap benefit from that shortage. American grain would seem to be sure to command large markets abroad this season, and American flour is in an equally commanding position. Importing countries require the best grain and flour, and they can secure both in the United States this year.

YPSILANTI MACHINE WORKS, YPSILANTI, MICH.

MILL BUILDERS

And Manufacturers of

FLOUR MILL MACHINERY



Sizes of Ferrier's Improved Four-Roller Mills.

8x12	6x15	6x20
9x15	9x18	9x24

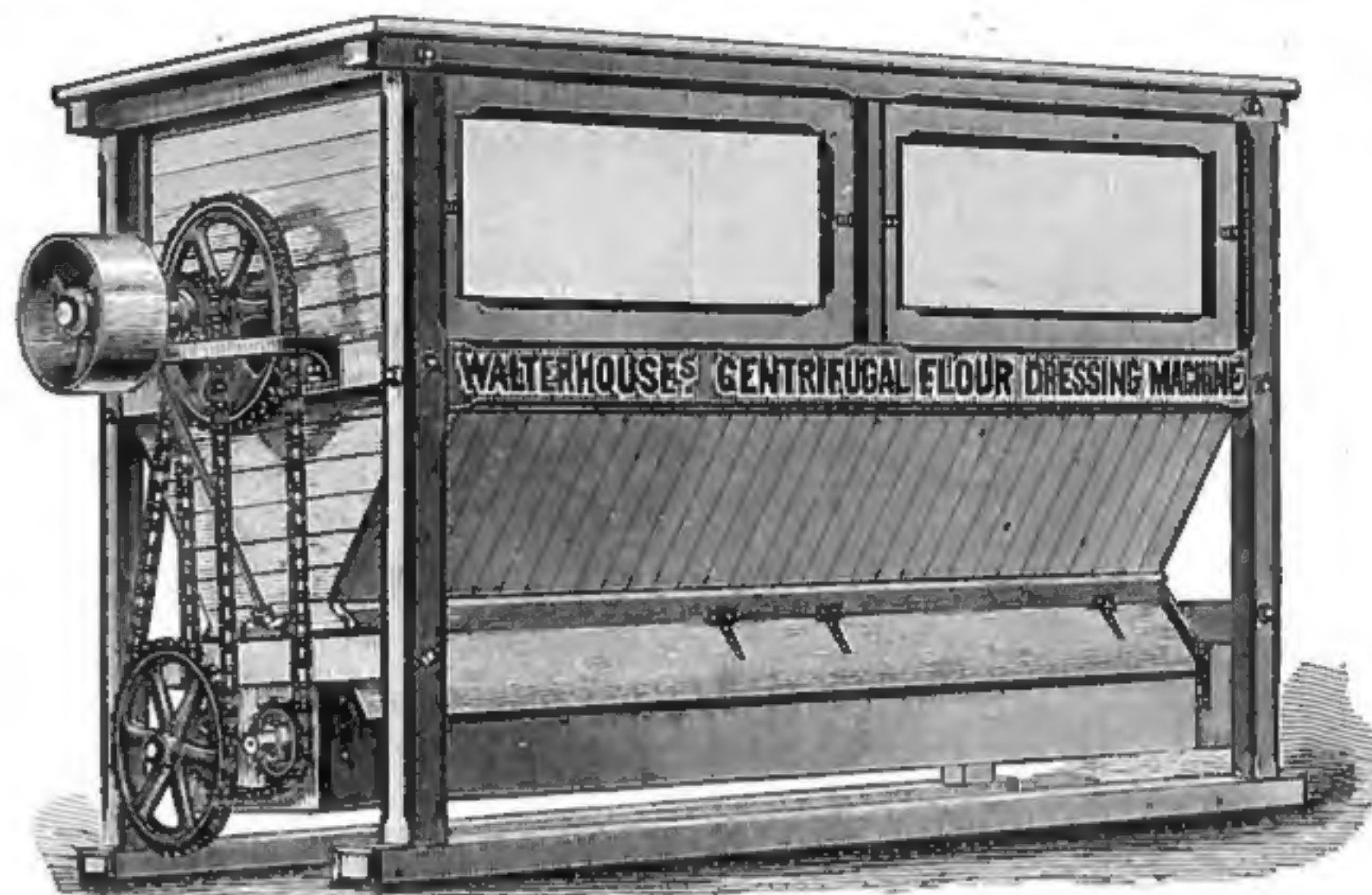
YPSILANTI MACHINE WORKS, YPSILANTI, MICH.

Gentlemen: We have had a line of your "Roller Mills" in use for over two years, and they have given entire satisfaction in every respect. They work like a charm, and their ease of adjustment and solid structure, together with the excellent finish you give them, can but recommend your machines to the milling public.

Yours respectfully, A. R. DICKINSON & CO.

NASHVILLE, TENN., MAY 3, 1889.

Dealers in Bolting Cloth. Walterhouse's Centrifugal; Walterhouse's Slow-Running Flour Dresser with Inside Cylinder; Plain Round Reels; Scalpers, Bolting Screens, Etc., Etc., Etc.



JOHN ORFF, PROPRIETOR OF
EMPIRE FLOURING MILLS,
FORT WAYNE, IND., APRIL 10, 1889.

YPSILANTI MACHINE WORKS, YPSILANTI, MICH.

Gentlemen: The Centrifugal Reel bought from you some time ago is doing its work complete in every respect. It does a large amount of work, and does it well. Should we make further changes in bolting, shall use more of them. Wishing you success, we remain,

Respectfully,

JOHN ORFF.

To YPSILANTI MACHINE WORKS.

OFFICE OF LEXINGTON MILL CO.,
LEXINGTON, MICH., JAN. 22, 1889.

Gents: In reply to yours of June 5th, would say that we are well pleased with our mill. It has more than met our expectations. Although it was feared that the six-inch rolls would not prove a success, we find them to be complete in every respect. We are making as fine a flour as there is made in the state, and we guarantee our patent to be equal to Minnesota Patent. The mill has given us no trouble whatever since we started it, and for plan and workmanship, your Mr. G. Walterhouse deserves great credit. If your friends doubt it would be pleased to have them come and see for themselves.

Yours respectfully,

LEXINGTON MILL CO.

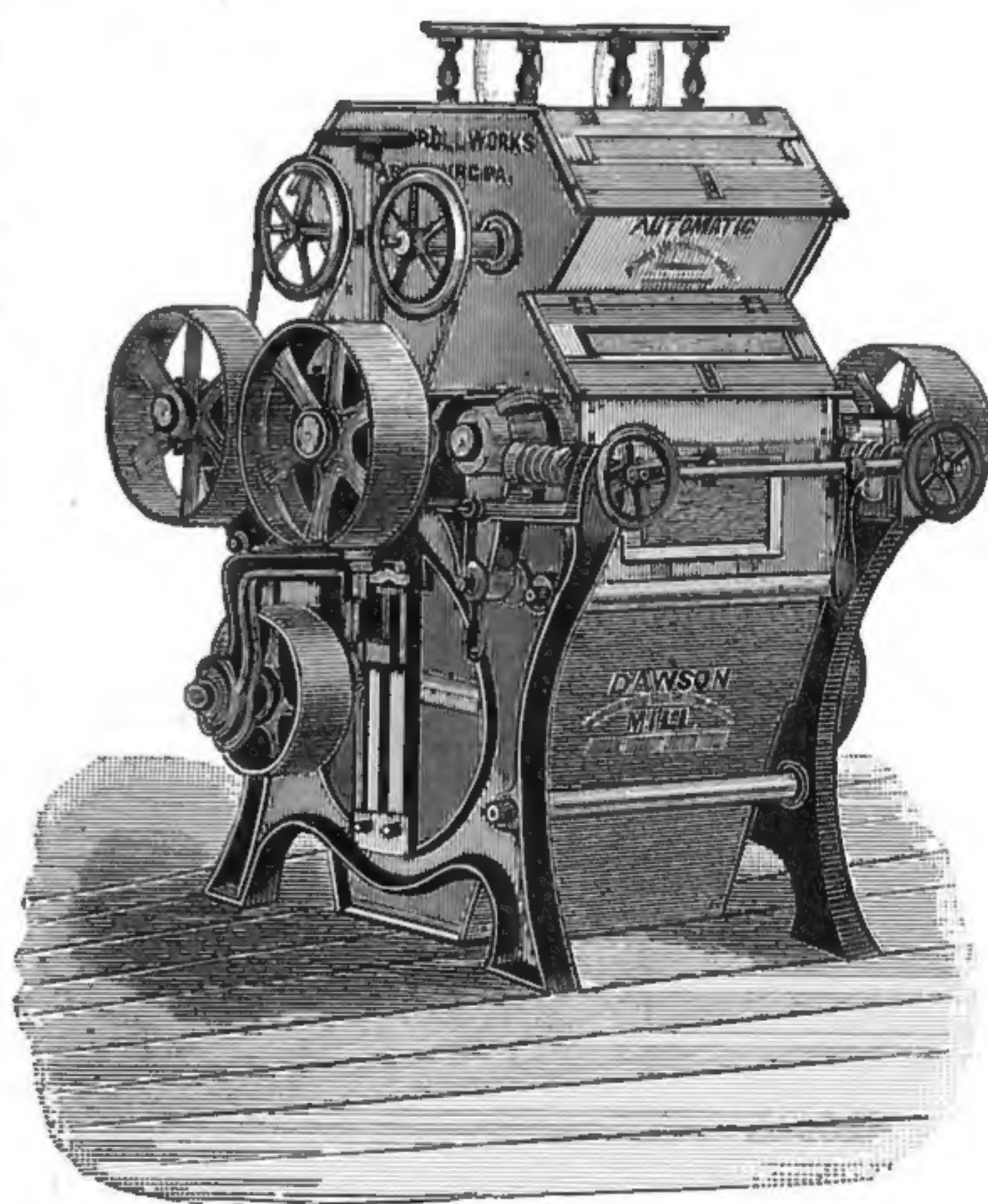
Dawson's Roller Mill

Is acknowledged to be the very best in the market. It has our Patent Automatic Centrifugal feeder, never failing to feed the stock the full length of rolls in an even sheet. It is the Latest and Best feed out, uses less power and is simple in construction. It can be placed on any style of machine with little expense. We use for roll bearings phosphor-bronze metal which will admit rolls being run at any speed without heating and with little friction, and uses little oil. We use the Dawson Corrugation, which is admitted the best in long or short system mills as the action is granulating rather than CUTTING.

We have a large plant to Re-grind and Re-Corrugate Rolls.

Owing to our late increased facilities and central location we are enabled to ship goods promptly on the shortest notice.

PARTIES CONTEMPLATING REMODELING THEIR MILLS OR BUYING ANY ROLLER MACHINES ARE REQUESTED TO PUT THEMSELVES IN CORRESPONDENCE WITH US.



FOR PRICE LISTS AND CIRCULARS, ADDRESS,

Dawson Roll Works, Harrisburg, Pa.

MILLING WORLD

AND
CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY. OFFICES: { Corner Pearl and Seneca Streets,
Over Bank of Attica.
McFAUL & NOLAN, - - - PROPRIETORS.
THOMAS McFAUL. JAMES NOLAN.

SUBSCRIPTION.

In the United States and Canada, postage prepaid, \$1.50 Per Year, in advance; remit by Postal Order, Registered Letter, or New York Exchange. Currency in un-registered letter at sender's risk.

To all Foreign Countries embraced in the General Postal Union, \$2.25 Per Year, in advance.

Subscribers can have the mailing address of their paper changed as often as they desire. Send both old and new addresses. Those who fail to receive their papers promptly will please notify at once.

ADVERTISING.

Rates for ordinary advertising made known on application.

Advertisements of Mills for Sale or to Rent; Partners, Help or Situation Wanted, or of a similar character One cent per word each insertion, or where four consecutive insertions are ordered at once, the charge will be Three cents per word. No advertisements taken for less than 25 cents. Cash must accompany all orders for advertisements of this class.

Orders for new advertisements should reach this office on Friday morning to insure immediate insertion. Changes for current advertisements should be sent so as to reach this office on Saturday morning.

EDITOR'S ANNOUNCEMENTS.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

Correspondents must give their full name and address, not necessarily for publication, but as a guarantee of good faith.

This paper has no connection with a millfurnishing house and aims to represent the trade without prejudice, fear or favor.

Address all communications

THE MILLING WORLD,
BUFFALO, N. Y.

Entered at the Post Office, at Buffalo, N. Y., as mail matter of second-class.

SITUATIONS WANTED.

Advertisements under this head, 25 cents each insertion for 25 words, and 1 cent for each additional word. Cash with order. Four consecutive insertions will be given for the price of three.

WANTED.

A situation as first or second miller. Married. Rolls or stone. Well up in rolls. Good stone dresser. "MILLER," 1845 Niagara street, Buffalo, N. Y. 19

WANTED.

A situation with parties who appreciate good work, with rolls or buhrs, on patents. Have the following recommendation from Miller Bros., Forest Grove, Ore., dated Nov. 10, 1887: "To whom it may concern: This is to certify that Peter Provost has been in our employ as head miller, and has given entire satisfaction. We believe him to be a very competent man, and cheerfully recommend him to the milling public." State wages you wish to pay. Address, PETER PROVOST, Menominee, Mich. 21

SPECIAL ADVERTISEMENTS.

Advertisements of Mills for Sale or Rent, Partners Wanted, Machines for Sale or Exchange, etc., etc., cost 1 cent per word, for one insertion, or 3 cents per word for four insertions. No order taken for less than 25 cents for one insertion, or 50 cents for four insertions. Cash must accompany the order. When replies are ordered sent care of this office, 10 cents must be added to pay postage.

WANTED.

A miller with some capital to help stock with, to take charge and run my mill. Address LOCK BOX 265, Clearfield, Clearfield county, Pa 1720

FOR SALE.

Several good second-hand and new turbines of various styles. Second-hand price list and descriptive matter and prices of our new machines sent free. Every one interested in the shortest route to successful milling on rolls or in grinding corn and feed with the least expense of power, should address us before buying.

FLENNIKEN TURBINE CO.,

Stf

Dubuque, Iowa.

MILL MACHINERY FOR SALE.

One No. 0 Standard Combined Separator, Smutter and Brush Machine; new, best make.
One 20-Inch Under-Runner Portable Mill, French Buhr Stone, capacity 10 to 12 bushels per hour; new, best make.
One 14-Inch Vertical Feed Mill; best make, new, a bargain.
One No. 6 Dustless Separator; new, a bargain.
One No. 1 Full Rigged Combined Dustless Separator; new, a bargain.
Four Corn Cob Crushers, right or left hand, driven from above or below, best make; capacity 40 to 60 bushels per hour.
Two No. 1 Corn Shellers. New.
One No. 2 Purifier. New. Best make. A bargain.
For particulars address, FRANK SMITH, care of THE MILLING WORLD, Buffalo, N. Y. 5tf

M-I-L-L-E-R-S

Wanting Bolting Cloths should write for discounts on same before purchasing elsewhere to

SAMUEL CAREY,
17 Broadway, New York.

MILL WANTED.

I want to rent a good water power custom mill for a long term of years. For particulars address "W," care of THE MILLING WORLD, Buffalo, N. Y. 1619

FOR SALE.

Flour-mill, corn-mill and cotton-gin, in a new growing country, splendid for wheat. Good opening for a mill-man who understands the business. For particulars apply to W. J. MILLER & CO., Ballinger, Texas. 2023

WANTED.

A good buhr miller, that thoroughly understands his business, to run a custom mill. Must be a sober, industrious man. State age, how long at the business, whether married or not, and best terms for steady employment. Give references. Address BEACH, BROWN & CO., Montrose, Pa. 2223

PETER PROVOST'S VALUABLE PATENT FOR SALE.

SOMETHING ENTIRELY NEW. A RARE CHANCE FOR SPECULATION.

No wide-awake manufacturer will deny that this is an age of progression, and that there is some thing new and more useful taking the place of the old, and still there are a few old fogies, who shut their eyes to the progress of art and science and say that patents are all humbugs and imagine every thing is perfect, just as our great-grandfathers thought when they called Fulton "crazy" when he discovered the use of steam. It is so with heating wheat and steaming wheat for cleaning. They say: "Some wheat does not need steaming, Peter Provost." They do not take into consideration the fact that nearly every thing of any value has one day been patented. Had it not been for inventors, we would be in the same state of affairs as when Adam and Eve were without even a suit of clothes. Then, certainly, no sane man can deny that inventors are the founders of improvement, and that it is right they should be protected by patents, securing to them a remunerative reward for their labors. When someone invents new and more useful machines, like Peter Provost's grain-sourer, patented Feb. 26, 1889, and No. 398,538, or tools and implements better than those in use, the wise manufacturer, who possesses that quick perception and sound judgment that eminently qualify him to discriminate between the truly useful implement and that which appears to be such, at once proceeds to investigate the merit and utility of the invention, to see whether or not it will pay to invest in its manufacture. I will sell state rights. Address, PETER PROVOST, Menominee, Mich. 1821

THIS is hot weather, but we stop the press to announce that the \$100,000 prize for "harnessing" the Niagara river is yet unclaimed. The money is here. The Niagara river is here. Where is the harness. Where is the harnesser?

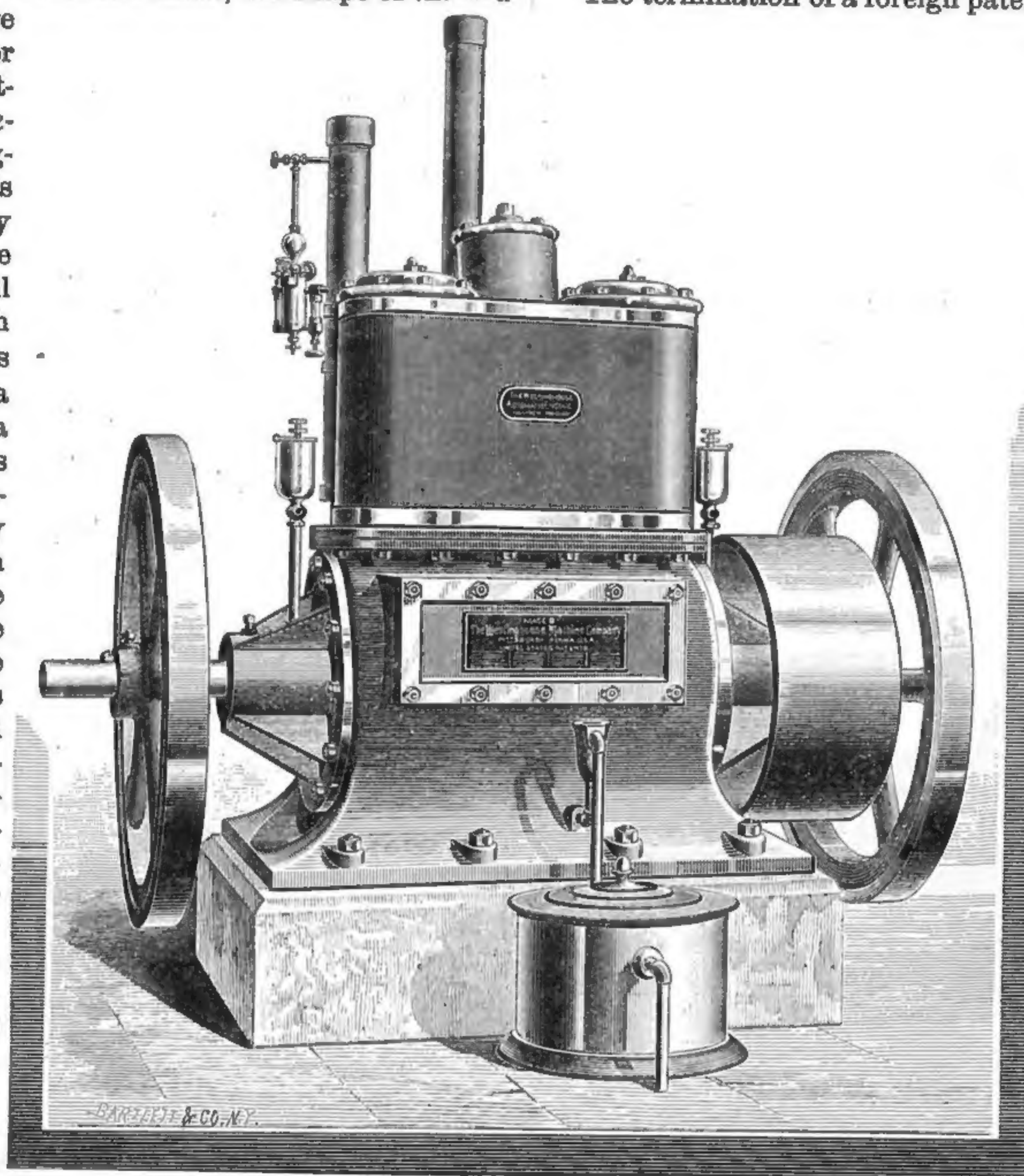
PROFESSOR BLOUNT, of the Colorado Agricultural College, whose remarkable experiments in wheat-culture have been recorded in these columns, has convinced himself that the wheat-growers of the United States are annually wasting 50,000,000 bushels of wheat in seeding. In other words, he asserts that the wheat area of the United States could be seeded with 50,000,000 bushels less than the quantity now used, while the results of planting on the method adopted by him, using 8 pounds of hand-picked seed to the acre instead of the 90 or more pounds generally used, will be very satisfactory in every way. If Professor Blount can successfully demonstrate the truth of his short-system method of planting wheat, he will deserve a monument built of wheat-grains.

MINNESOTA appropriately comes to the front with a rigid law against the sale of alum baking-powders not distinctly labeled to show what they are. The law, now in operation, does not forbid Minnesotans to make or to eat alum baking-powders if they wish to, but it provides that all such mixtures shall bear this legend: "This Baking Powder Contains Alum," plainly marked upon the package. The law is a good one. It interferes with no reasonable privileges or rights, and it does protect consumers by giving them a chance to decide whether or not they shall eat the poisonous alum. If alum is a superfluity in any state, it should be in Minnesota, the native heath of the finest wheat grain and flour in the world. Every state in the Union should adopt stringent laws on the subject of food mixtures containing alum.

AUSTRO-HUNGARIAN millers will, during the coming grinding campaign, find themselves in the very unpleasant condition in which American millers found themselves during the campaign just ended. They have a short crop, of very inferior quality, the grain being shrunken, light and shriveled. Now let them show their mettle as the American millers did on a similar crop last season. They will have to use more wheat to make a barrel or quintal of flour. They will have to expend more power, more time, more care, more money in every way in producing a quintal of flour. More of their flour will go to bran in the wrinkled grain, despite all their efforts. Their German neighbors, with an abundant crop of average quality, will have a very decided advantage over them this year, and so will all the European millers situated to the west of them.

THE "STANDARD" AUTOMATIC ENGINE.

Herewith is illustrated one of the highly successful engines manufactured by the well-known Westinghouse Machine Company, of Pittsburgh, Pa. The engraving shows a front view of the "Standard" automatic engine. These famous engines are essentially "high-speed engines," and not merely "engines speeded high." They are built to meet the demand that has arisen for faster running engines, and it is in respect to high speeds that the Westinghouse engine marks a distinct period in steam engineering. Its design has eliminated every point in which speed produces an injurious effect. The makers say: "The most serious results from high speed in the horizontal engine are found in lost motion and the consequent close adjustment; in the danger from heated bearings, due to the impossibility of maintaining continuous and sufficient lubrication; in the springing of the transmitting parts, etc. The Westinghouse engine is insensible to lost motion, since its strains are all in one direction, and to this extent it becomes self-adjusting. Lubrication is insured by all the running parts revolving in oil. All strains are transmitted direct, the shape of the bed being such as to insure a degree of rigidity per pound of metal not attained in any other design. The good judgment displayed in this design is borne out by the fact, to which we can attest, that in all our experience with single-acting engines there has never been a difficulty met, nor a charge made, nor has any customer ever attributed any difficulty which may have been encountered to the speed at which the Westinghouse engine operates. This fact is most clearly illustrated by our every-day practice, in which the matter of 50 or 100 revolution more or less is considered of no particular importance." In designing the Westinghouse engine the special objective points aimed at by the makers, as stated in their catalogue, are as follows: 1. To render the engine, by its extreme simplicity and the peculiarities of its design as to the adjustments, keying up, packing, oiling, etc., independent of the careless attendance of an unskilled engineer. 2. To reduce the requirement of repairs to a minimum by making the good performance of the engine independent of wear. 3. To make the repairs, when required, from our own works, at the lowest possible expense of time and money, by renewing (not patching up) removable and inexpensive wearing parts only, by duplication to gauge, thus maintaining the engine in all essential respects new, even after long use. 4. To secure high speed, which modern practice and experience has shown to be desirable in a degree for all purposes of power, and absolutely essential in many cases, as in electric lighting, centrifugal pumping, blowing, etc. 5. To retain with the above advantages a high grade of fuel economy. To place a strictly first-class automatic engine on the market at a moderate price, by systematic manufacture on a large scale without reference to orders. This has never before been attempted except with



THE WESTINGHOUSE "STANDARD" AUTOMATIC ENGINE.

small engines. To accomplish all these points without sacrificing either durability or economy the makers have steadily kept in view the principle of employing large steam-ports, large exhaust openings, balance and lightness of reciprocating parts, constant direction of strains, large bearing surfaces, lubrication with never-failing certainty, rigidity of parts, simplicity, accessibility, permanence of adjustment, balanced valve, relief from water in the cylinder and the highest degree of excellence in workmanship and material throughout. The instantaneous success of the Westinghouse engines proves that the makers have accomplished every thing which they set out to accomplish. Send for a copy of their catalogue containing a full description of the "Standard" automatic engine.

UNITED STATES COURT DECISIONS.

Letters patent of the United States granted after a foreign patent for the same invention had lapsed and become null and void by reason of the non-payment of a stamp duty, *Held*, granted without authority of law and void.

The termination of a foreign patent prior to the time specified on the face of the grant by the failure of the patentee to comply with some requirement of the foreign law has the effect of terminating a subsequently-issued American patent for the same invention.

A patent for an invention can not be re-issued for the mere purpose of enlarging the claim, unless there has been a clear mistake inadvertently committed in wording the claim.

A finding of the Commissioner of Patents as to an original patent, being inoperative by reasons of inadvertence, accident, or mistake, may be reviewed in a suit for infringement, at least to the extent of determining whether as a matter of law what was described and alleged to be a mistake was such a mistake as will warrant a reissue.

Where an applicant, desiring to secure a patent on a combination of old mechanical devices, included a certain element in each claim because he thought it necessary to the usefulness of the machine as a whole, and after the grant of his patent another patent for a similar machine was granted with claims which he thought broader than his own, and in order to invalidate said second patent the first patentee applied for and obtained a reissue with claims so broad that they substantially claimed as a separate device one of the original elements which was old, *Held*, that there had been no such inadvertence, accident, or mistake as to warrant a reissue and that said broadened claims were void.

A change in the method of making an article of manufacture producing a different and beneficial result, although the difference consists only in improving or cheapening the article, and the change and its advantages not having been seen or made by others interested in seeing and making it, is sufficient evidence of invention to sustain a process patent.

DEFECTS IN BOILERS.

"The Locomotive."

Many seem to think that no great amount of skill is required to qualify one as an inspector of steam-boilers, but this is a very erroneous impression. The reports of the inspectors of the Hartford Steam Boiler Inspection and Insurance Company, published each month in *"The Locomotive,"* afford abundant evidence that the ills to which boilers are heirs are very numerous and varied, and each inspector must constantly be on his guard, so that the slightest detail may not escape him. He must, in the first place, possess all the qualities that go to make up a first-class steam-engineer; and secondly, he must have a clear head and a sound judgment. He must not only observe every defect that exists in a boiler; he must also be able to tell at once whether any defect that he may find is dangerous or not, and whether it is likely to become so by continued use. He has, on the one hand, to warn the owner of the boiler of the slightest defect that may cause damage of any kind, and on the other hand, he must be careful not to advise the making of repairs that are not in reality necessary. Fig. 2 in this issue shows a piece of a boiler that had been examined (but not by one of our inspectors) and pronounced in good condition. It ran

for three weeks, at the end of which time it showed evident signs of weakness, and the proprietor, realizing its

condition, immediately summoned an inspector of this company and requested him to look it over and see what was the trouble. The plate at the back end of the boiler was

FIG. 1.

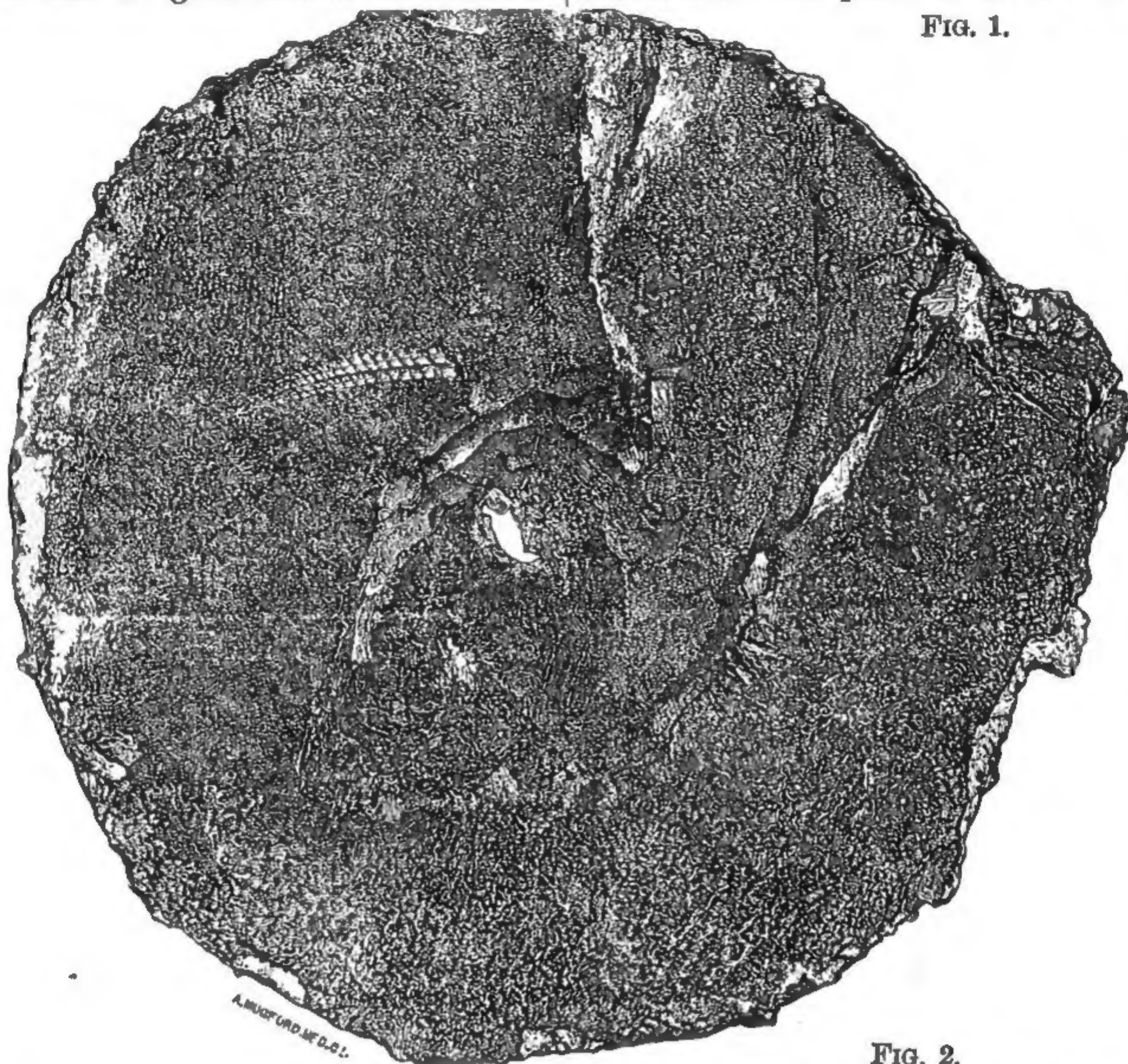
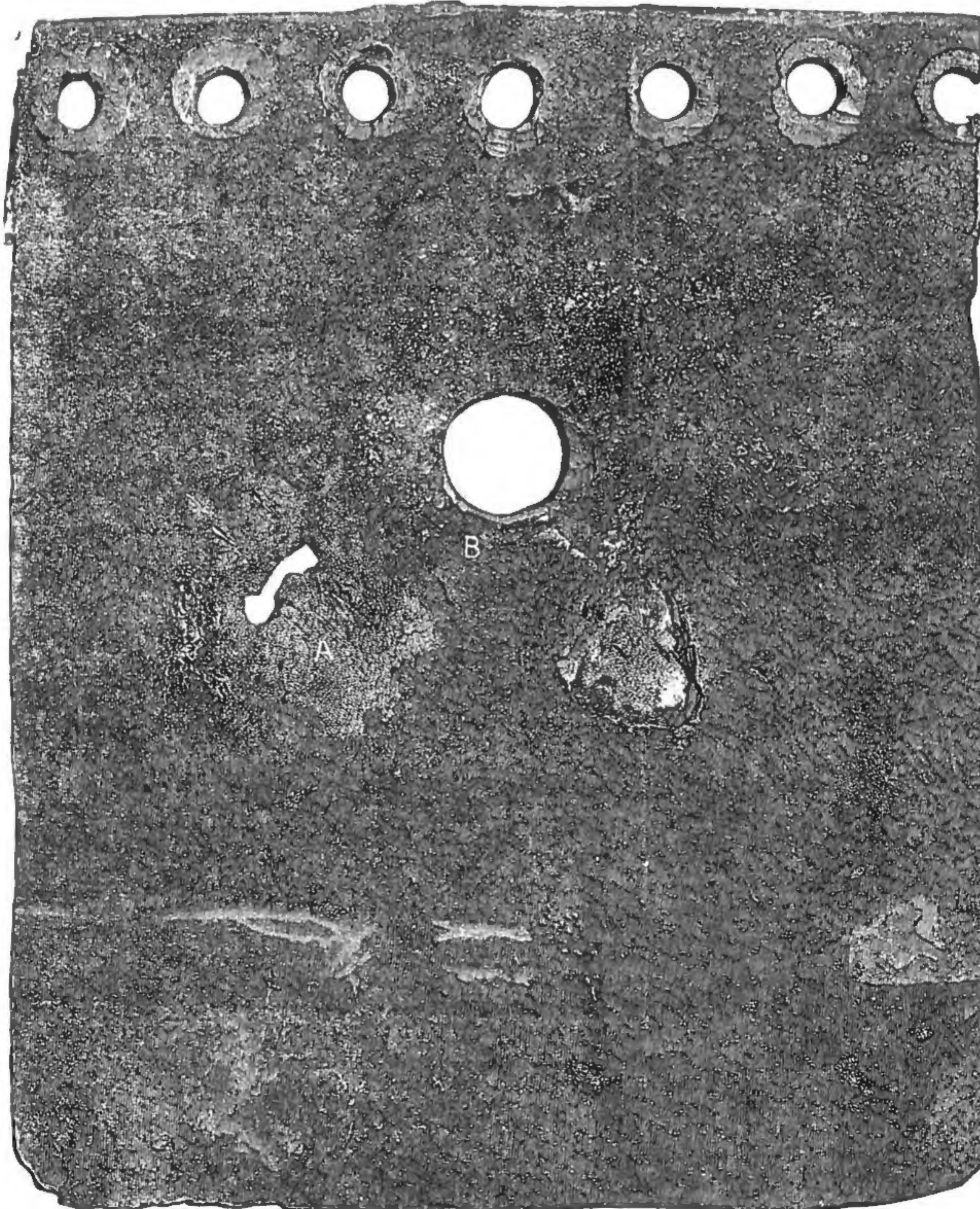


FIG. 2.



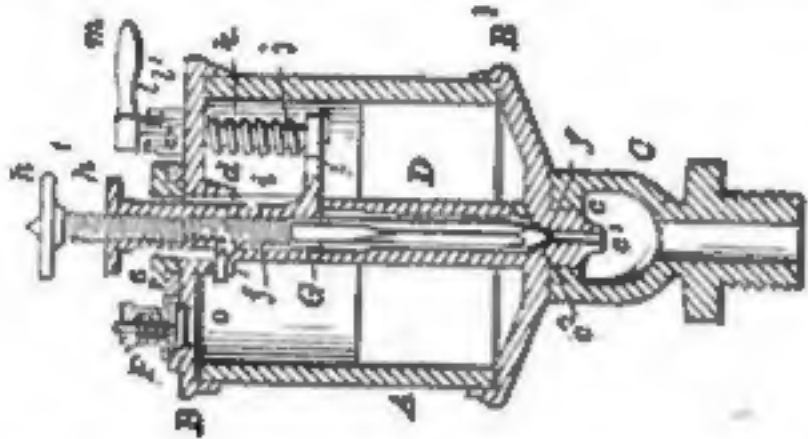
eaten entirely through by corrosion in one place, as is shown at A; and around the blow-off pipe at B the plate was so weakened from the same cause that the inspector pulled the blow-off out by hand. Here was an instance in which a man, who no doubt knew considerable about boilers and was considered competent to decide on their fitness for use, entirely overlooked a dangerous and very marked defect that might have produced disastrous consequences had our inspector not found it. Fig. 1 shows, full-size, a defect that occurred in the same neighborhood, which illustrates the necessity of sound judgment on the part of the inspector. One of our men, in examining the boiler, found a small, very thin internal blister in the steam-space, and with a cold-chisel and hammer he trimmed it up in the usual way. All that then remained of it was the tongue-shaped depression extending from about the center of the engraving up to upper right-hand edge. The blister was small, slight and local and could not possibly give any trouble. Afterward some one who was examining the boiler (it was not one of our men), found it, and although it

had not changed its appearance in the slightest, and had never given the least trouble, he recommended the proprie

tor to have it cut out and replaced by a patch. The piece that was cut out is shown in the engraving. The metal was sound and strong, and the hole through the middle of the piece indicated by the white spot was made with difficulty. In a word, the expense of cutting out this piece was wholly unnecessary, and the plate with the patch on it is not as strong nor as durable as the original plate with the blister.

MILLING PATENTS. LUBRICATOR.

405,543. Edward G. Felthousen, Buffalo, N. Y., assignor of one-half to Charles A. Sherwood, same place. Filed Dec. 26, 1888. Serial No. 294,589. Dated June 18, 1889.



CLAIM 1. In a lubricator, the combination, with the oil-chamber provided with a discharge-passage, of a vertically-movable sleeve or support arranged within said oil-chamber, a spring whereby said support is held in a depressed position, and a regulating-valve arranged in said discharge-passage and made vertically adjustable in said sleeve or support.

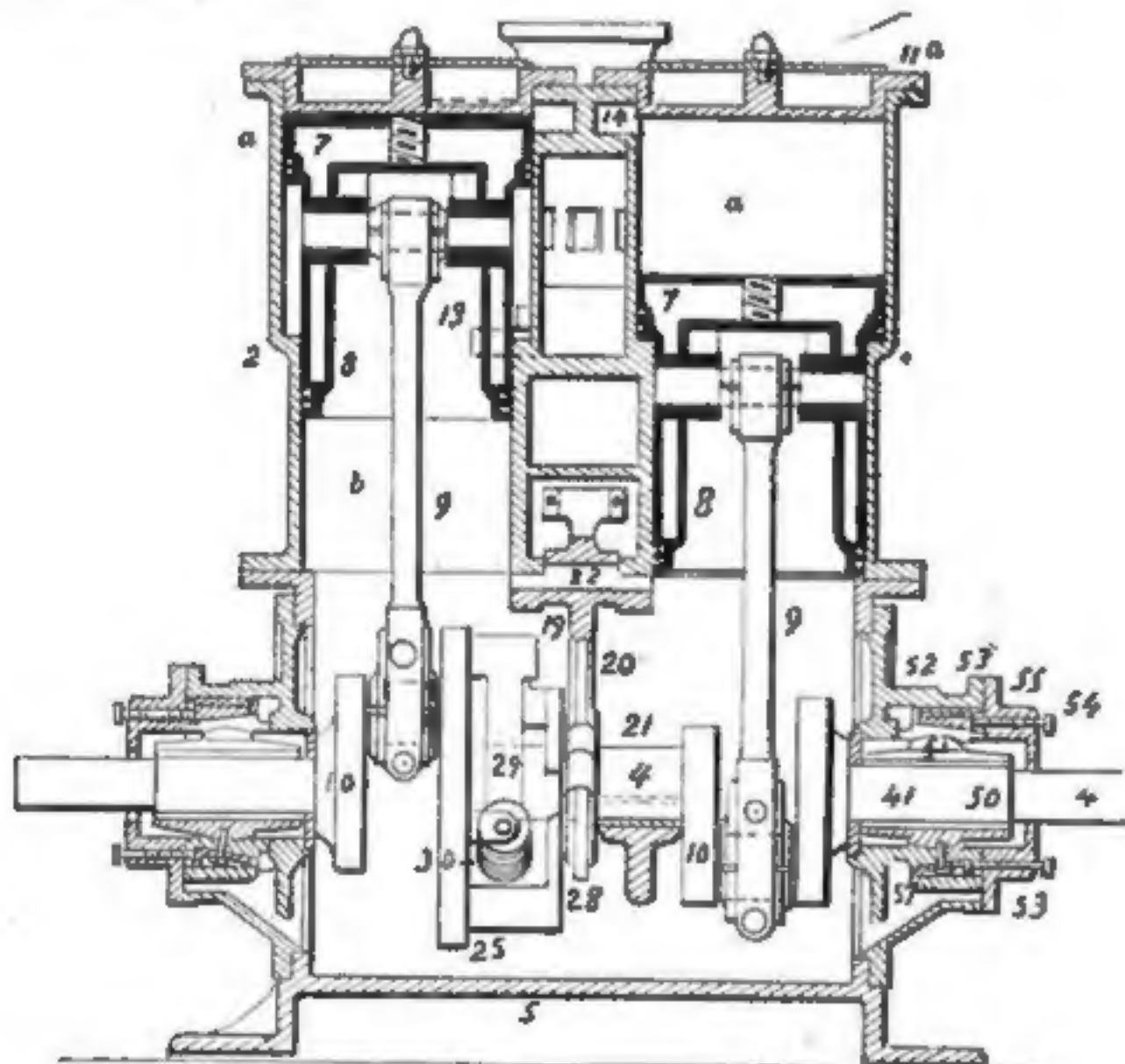
2. The combination, with the oil-chamber provided with a discharge-passage, of an upright tube arranged within said oil-chamber, a sliding sleeve arranged in said upright tube, a spring whereby said sleeve is pressed downwardly, and a regulating-valve arranged in said discharge-passage and provided with a stem which is made vertically adjustable in said sliding sleeve.

3. The combination, with the oil-chamber provided with a discharge-passage, of a vertically-moveable sleeve or support arranged within said oil-chamber, a spring whereby said support is held in a depressed position, an elevated-rod attached to said sleeve and provided with a pin or projection, a cam or incline against which said pin engages, whereby the rod is elevated upon turning the same, and a regulating-valve carried by said stem and capable of being adjusted vertically in the same.

4. The combination, with the oil-chamber provided with a discharge-passage, of an upright tube arranged within said oil-chamber, an internally-threaded sliding sleeve arranged in said upright tube and provided with an arm projecting through a slot in said tube, an elevating-rod attached to said arm, provided with a pin or projection and with a hand-lever, a cam or incline arranged at the top of the lubricator, against which said pin engages, a spring whereby said sliding sleeve and elevating-rod are held in a depressed position, and a regulating-valve arranged in the discharge-passage of the oil-chamber and provided with an externally-screw-threaded stem engaging with the internal thread of the sliding sleeve.

COMPOUND ENGINE.

405,812. George Westinghouse, Jr., and Francis M. Rites, Pittsburgh, Pa. Filed Feb. 16, 1889. Serial No. 300,166. Dated June 25, 1889.



CLAIM 1. In a compound engine, the combination of two cylinders each bored out to a larger and a smaller diameter in the upper and lower portions, respectively, of its length, trunk-pistons fitting said cylinders, a crank-shaft journaled in bearings below the cylinders and provided with oppositely-set cranks, connecting-rods coupling the pistons to the pins of said cranks, and two distribution-valves which are reciprocated in respectively opposite directions by connections from the crank-shaft, each of said valves controlling the supply and exhaust ports of one of cylinders.

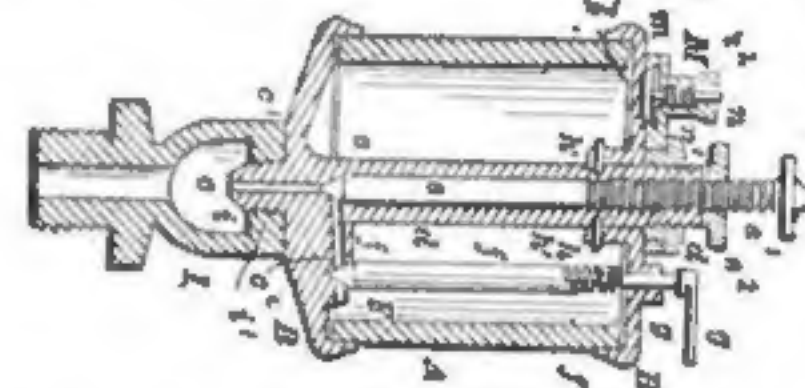
2. In a compound engine, the combination of two cylinders each bored out to a larger and a smaller diameter in the upper and lower portions, respectively, of its length, trunk-pistons fitting said cylinders, a crank-shaft journaled in bearings below the cylinders and provided with oppositely-set cranks, connecting rods coupling the pistons to the pins of said

cranks, two distribution-valves each controlling the supply and exhaust ports of one of the cylinders, and a single automatic cut-off mechanism coupled to and actuating said distribution-valves.

3. In a compound engine the combination of two cylinders, each bored out to a larger and a smaller diameter in the upper and lower portions, respectively, of its length, trunk-pistons fitting said cylinders, a crank-shaft journaled in bearings below the cylinders and provided with oppositely-set cranks, connecting-rods coupling the pistons to the pins of said cranks, two distribution-valves each controlling the supply and exhaust ports of one of the cylinders, a centrifugal governor or regulator fixed upon the crank, an adjustable eccentric which is coupled to and varied in position by the governor, and an oscillating rocker having its arms coupled to the strap of said eccentric and to the stems of the distribution-valves.

LUBRICATOR.

405,885. Thomas J. Hart, Buffalo, N. Y., assignor to Felthousen & Sherwood, same place. Filed Oct. 20, 1888. Serial No. 288,641. Dated June 25, 1889.



CLAIM 1. In a lubricator, the combination, with the oil-chamber provided with a central discharge-passage *c'* in its bottom, and a lateral discharge-passage *c2*, forming a communication between the oil-chamber and the central discharge-passage of a regulating valve arranged in the central discharge-passage and provided with a valve stem extending through the top of the oil-chamber, whereby the flow of oil from the lateral discharge-passage into the central discharge-passage is regulated, and a cut-off valve arranged in the lateral discharge-passage and provided with a valve-stem extending through the top of the oil-chamber on one side of the stem of the regulating valve, whereby the communication between the central discharge-passage and the oil-chamber can be closed without disturbing the position of the regulating-valve.

2. The combination, in a lubricator provided with a discharge-passage *c'*, and a lateral passage *c2*, communicating with said discharge-passage, of an upright tube *d*, arranged within the lubricator above the passage *c'*, and provided with an internal screw-thread, a regulating valve *e'*, arranged within said tube and provided with an external screw-thread, and a cut-off valve arranged within the lubricator, controlling the lateral passage *c2*, and having a stem extending through the cap of the lubricator.

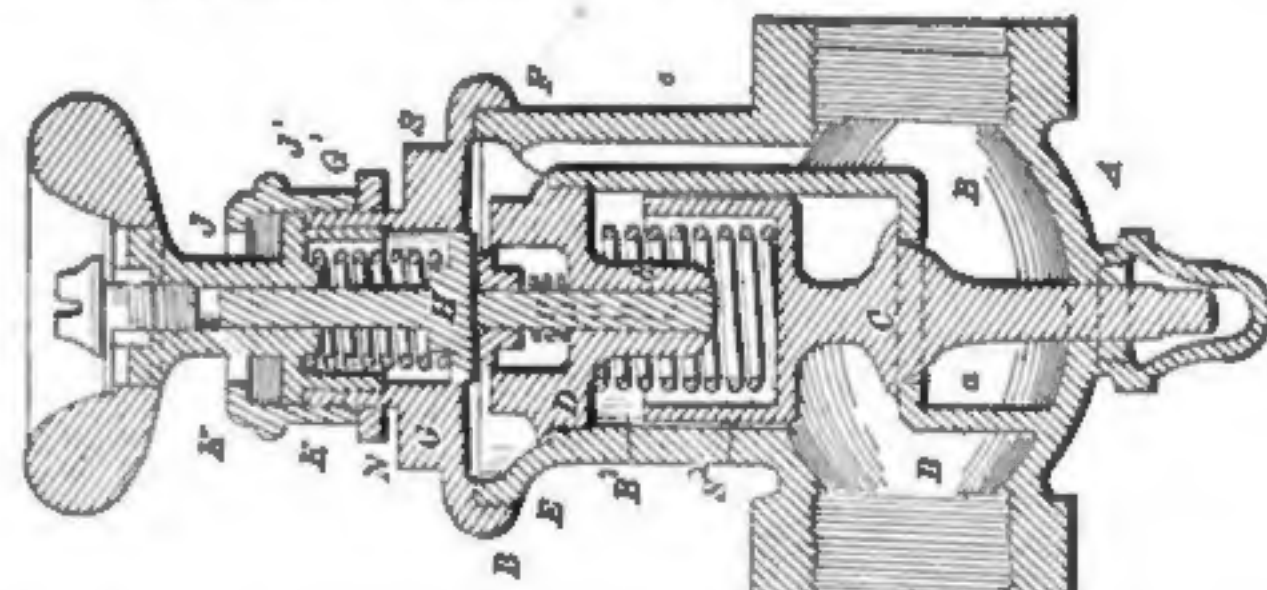
3. The combination, with the oil-chamber of the lubricator provided with a discharge-passage *c'*, and a lateral passage *c2*, communicating with the same, of a regulating-valve arranged in said discharge-passage, a cut-off valve arranged in the lateral passage *c2*, and provided with a stem extending through the top of the oil-chamber, a spring whereby said valve is depressed, an incline arranged at the top of the lubricator, and a pin or projection arranged on said valve-stem and adapted to bear against said incline.

4. The combination, in a lubricator provided in its top with a feed-opening *l*, of a laterally swinging arm *M*, pivoted to the top of the lubricator and provided on its under side with a recess arranged above the opening *l*, and a cap *n'*, arranged above said recess, a valve *m*, arranged in said recess and inclosed by the arm *M*, and a spiral spring *n2*, inclosed by said cap and bearing upon the valve, whereby the latter is depressed in its seat.

5. The combination, with the cylinder *A* and the cap *B*, provided with a depending sleeve *h2*, having notches *h'*, of the head *B'*, and the tube *d*, provided with pins *h*, engaging in said notches, whereby the cap is held against turning on the cylinder *A*.

STEAM-PRESSURE REGULATOR.

406,029. Nelson Curtis, Boston, Mass. Filed Nov. 7, 1888. Serial No. 290,220. Dated July 2, 1889.



CLAIM. In a steam pressure regulator containing a steam passage-way and a piston valve therein and provided with a regulating device consisting, essentially, of a compression spring and screw rod therefor located in a cap or projection of the shell of said regulator, in combination with said compression spring and screw rod, the collar *J'* on said screw rod, the ring or shoulder *G'*, projecting from said cap beneath said collar, the internally threaded sleeve *K* on the outside of said ring or shoulder *G'*, provided with a shoulder *K'* above said collar *J'*, and nut *N*.

COTEMPORARY COMMENT.

The Canadian millers at their recent meeting complained that they are suffering from the competition of Canadian railways, which convey flour from Minneapolis to our Mari-

time Provinces at a much less rate than from certain points in Canada. Facts of this kind to be perfectly understood should be set out in detail. This discrimination is a reality, and if on examination it should be found as serious as represented, it is reasonable to hope that some relief might be obtained. The chief complaint is at present made against the Canadian Pacific, its connection with Minneapolis giving it peculiar facilities for doing the business in question at low rates. But individuals who, as part of the public, have contributed to the subsidies enjoyed by a railway, can never be expected to take kindly a use of the road which is, as they deem, unfair to their business and injurious to their interests.—*Toronto, Canada, "Monetary Times."*

He (Secretary Barry, of the Millers' National Association) will find his position no sinecure. More will be expected of him than it is possible for one man to accomplish, and there are perhaps as many kickers as pushers among millers as in any other trade. That he will work early and late, there is no doubt and we look for satisfactory results.—*Milwaukee "United States Miller & Milling Engineer."*

It would take \$300,000,000 to buy half of the flour-mills of this country, and the British capitalist would fail worse than the American miller to gain a pound where the American lost a shilling. Let them come with their cash. Very little of it will ever see "old England" again.—*Indianapolis "Millstone."*

PRACTICAL AND PERSONAL POETRY.

THE ROLLER MILL.

The roller mill may not be so romantic
As the old mills of poets' fame,
But when it comes to making cash
It gets there just the same.
We wish these poets would let up
At once on their silly game
Of praising the ancient water mill
That gets there not the same.

It looks very nice on paper,
To read of the water mill's song,
Of quiet streams and rural scenes
In June when the days are long.
But that isn't just what's wanted
In this practical age and day;
And we'd like to hear about the mill
That seems to have come to stay.

So let the old mills rest in peace,
For that seems to be their fate;
For no more do their pond'rous wheels go round
From early morn till late.
And say no more of babbling brooks,
And shady nook and glen,
But change them to the roller plan
And make them hum again.

J. F. Neaderhouser in "The Millstone."

THE THREE CLACKERS.

I never knew two nicer fellows—and these two
Are Whang and Bang.
I've known one of them years—and he's true blue—
And that is Whang;
But t'other one's a late acquaintance, who
Is my friend Bang—
I 'most forgot to say my own name's Clang—
Gosh Dang!

Whang had a rural fad—it was the sap
Of yellow corn—
While Bang, with some success, has tried to map,
Sure's I am born,
Through upturned glass of beer, the heavenly scrap,
Called Capricorn;
But neither filled the scientific gap
In proper form.

Their main success in life is making rhyme
Of harshest clang,
That's split the ears of millers many a time
Of whom they sang,
But for this work they've taken many a dime
Without a pang;
The final recompense will be a warmer clime
For Bang and Whang.

Clang in "The Millstone."

THE SIOUX CITY CORN PALACE.

Enterprising Sioux City, Iowa, is building another magnificent palace for King Corn. Following is a description of the structure, which will be formally opened on the 23d of September: The building will have a frontage of 240 feet on Sixth street, extending from the west curb on Pierce street to the east side of the alley between Pierce and Nebraska streets, and a depth of 120 feet north and south. The principal entrance, in the center of the south facade, is a

wide open portico, two stories in height, the roof of which forms a terrace opening from the third story balconies. The main feature of the design, a large square tower 200 feet in height, rises at the back of the portico. This tower is flanked on each side by smaller ones, with pinnacles and ornamental balconies. The balconies are connected with the different stories of the small towers by light bridges, and flying buttresses connect the angles of the towers with slender buttress piers at the corners of the main tower terrace.

Passing inside, at the back of the tower framing will be a large music or amusement stand, or stage, with the ceiling open to the roof, and covered with a large fan-like sounding-board. At the sides of this stand, and extending well in front, will be two large open spaces. These are the main wings of the building, with a combined floor space of 8,000 square feet. Around these open spaces the booths and sections for exhibitors will be arranged. Over the booths will be a wide balcony, extending around three sides of each wing and connecting with the second story of the tower, which will directly face the amusement stand and be devoted to the refreshment features of the Palace. A feature of the design is the wide balcony in the west end, where the building spans Pierce street. Wide stairways will extend from the main floor to the balconies at each side of the tower, easy of access and ascent and affording ample exit.

The building would not be a Corn Palace were it not for the decorations. Its general style will perhaps adapt it to the graceful forms and brilliant tints of the corn products of the West as well as any that could have been selected; and while the decoration will start with a full-grown American flag 220 feet above the ground, and numerous bits of bunting will be unfurled lower down, the main covering and enrichment of the structure will be grains and corn in all their obtainable forms. The design for the interior contemplates a more complete preparation for the decorative work than has been attempted before. A prominent feature of the design is the elevator running to the 100-foot elevator of the main tower, where a large refreshment room and wide terrace supply a substantial motive for a somewhat airy flight. Above this easy stairs ascend to the 160-foot level and to a hanging balcony 150 feet from the ground. The general style of the building will be composite, with a strong leaning toward the "Corn Palace idea." The openings in the exterior walls will be symmetrically arranged, generally with arched tops. Those in the first story will be separated by slender columns with oriental capitals, that arrangement admitting the maximum of light to the booths inside.

J. O. Adams, who has a bonanza farm in Dakota, says that wheat-fields he was going to plow up will yield 8 to 10 bushels per acre, and the land he thought might yield 15 to 16 bushels will produce 20 to 25 bushels.

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WEIGHING MENTAL PROCESSES.—According to recent statements an Italian inventor has constructed a machine which “registers in pounds and ounces the amount of brain-power expended in mental effort and tells you just how much a dream weighs, or how many pounds of brain cells you consumed in reading a book, or writing a poem, or listening to a sermon.”

GENERAL NOTES.

THE census of 1888 fixes the population of Ireland at 4,777,555, which is 400,000 less than it was in 1881.

ACCORDING to the Board of Trade statistics of Chicago for 1888, the manufactories of the city number 2,400, employing a capital of \$117,000,000, paying 132,000 wage earners \$74,000,000 annually, and the value of the product is \$402,000,000. The production of some of her largest industries is as follows: Meat \$95,000,000; foundries and machine-shops \$28,000,000; furniture \$16,000,000; agricultural implements \$12,000,000; rolling-mills and locomotive works \$16,000,000; breweries and malt houses over \$13,000,000. The receipts of leading articles of produce were, flour and grain 182,588,188 bushels; hogs and cattle over 7,500,000; lumber 2,066,927,000 feet; shingles 793,171,000; coal 5,517,359 tons.

POINTS IN MILLING.

BRITISH millers, who had last year to grind native grain deficient at least 12 per cent. in quality, are this year to have better home-grown grain to grind. I have lately seen some samples of “fine” English-made flour from English wheat of 1888, and it is a curious product, to say the least. The wheat may have been very bad. Certainly the flour is very peculiar, and if it is a specimen of the average product of English mills, it is easy to understand why Great Britain imports enormous quantities of American flour.

ACCORDING to a recent Washington announcement, the authorities in the agricultural department are about to make an investigation of foreign wheats, the aim being to learn which European, African or Asiatic wheats are good grains to plant in the United States. The move is a wise one in every way. I do not accept the assertion that American wheats have sadly deteriorated. They are still the best wheats grown, and this year the winter wheat is particularly fine in quality. Last year, in common with nearly all the wheat-growing countries of the world, the United States had a crop somewhat deficient in quality, but that fact did not prove, as it was said to prove by European sensationalists, that the quality of American grain had become permanently debased. New varieties of wheat should be introduced with caution. There is no need for doubt or risk in the move to secure new varieties.

THE miller who will try to make one machine do the work of two machines never dies. The miller who employs two machines to do the work that should be done by one machine never dies. I find them everywhere. There are more of the former than of the latter class. Both classes ought to be abolished.

“CONFOUND rolls, any way! They a’n’t worth powder enough to blow ’em up with! I wish we could go back to buhrs again!” So grumbled an exasperated miller to me not long ago. The reason for his grumbling was easy to find. He was using rolls without taking the pains to learn how to use them properly. His mill was well equipped with good machines, but every machine showed that neither he nor his assistants knew how to use it. To start with, the rolls,

which he charged with all the trouble, had been run “every which way,” until they were about as well fitted for grinding as so many pairs of corkscrews rolling in their places. Some of those rolls were as destitute of corrugations as Methusaleh’s head must have been of hair, and the old miller did not dream that re-corrugation goes along with the use of rolls. All the other machines showed the effects of fearful neglect and worn-outness in important points, and there was small wonder that the disgusted owner felt like burning his roller mill and rebuilding with a buhr outfit. As usual, the trouble really was in the man, and not in the machines as machines. Had he learned how to use the outfit, all would have gone well. Moral: Don’t “cuss out” a machine or a system which you do not understand.

“MYSTERIOUS” fires are not rare things, and with the word “mysterious” very little fault can be found. In nine cases out of ten spontaneous combustion lies at the bottom of the “mystery.” In every mill there are substances that favor that sort of combustion, dust, rags, waste, oil and other things. It should be the owner’s care to see that none of these “mysteries” are left lying around in out-of-the-way corners. A thorough inspection of the mill, from peak to basement, inside and out, should be made at least once a week, and every accumulation of dust, oil or other inflammable material should be removed. In a mill thus cared for there will never be a “mysterious” fire. “Mysterious” generally means “careless” in the case of fires in flour-mills. Certain conditions are necessary to every fire, and it is generally carelessness that provides those conditions.

SHOULD the British investment seekers take hold of any of the larger flouring establishments of the United States, it will be interesting to watch their course of action in the matter of grinding single or mixed wheats. Should British ideas of “blending” grains be attempted here, the direct competition between single and mixed milling will soon settle the point so thoroughly that even British prejudice and conservatism would be forced to acknowledge defeat.

THE prospective entrance of British ideas into the arena of American milling may be regarded as important in more ways than one. It becomes pertinent to speculate upon the effect of those ideas upon the reputation of American flour. Should no decided change be made in the management of the mills that may be bought by the British capitalists, the situation will not be changed so far as the flour is concerned. But will these investors, many of them presumably practical millers, be willing to go on making flour similar to that which they have for years been denouncing as “merely respectable offal”? Flour-makers who are familiar with British milling literature know that the British attitude toward American milling has been one of destructive criticism, that the British idea is that the flour made by American millers has been salable only because of the supreme excellence of the American wheat, and that American millers are at the best only bungling, botching, unscientific flour-makers, who operate chiefly on wheat so good and so fine that they are unable to spoil it in grinding. Should the men holding these ideas come to the United States to make flour, they will probably have their eyes opened. Their coming will be an interesting event in American milling.

BOOKS AND PAMPHLETS.

We have upon our table that most complete work for the ladies of every household, *Godey’s Lady’s Book*, for August, 1889. It is always too full of good things for any paper to mention or even give a brief outline of them all. A charming frontispiece greets the eye upon opening the book; besides a handsome colored fashion-plate, colored work design and black fashion-plates. The reading matter is always of the purest. This magazine is one of the best and should be in every family. Address *Godey’s Lady’s Book*, Philadelphia, Pa.

PERSONAL MENTION.

Mr. Robert Grimshaw, well-known to all our readers as a mechanical and scientific writer, has been appointed by the French Ministry of Commerce and Industry a member of the Committee on Patronage of the International Congress of Applied Mechanics to be held in Paris, France, in September.

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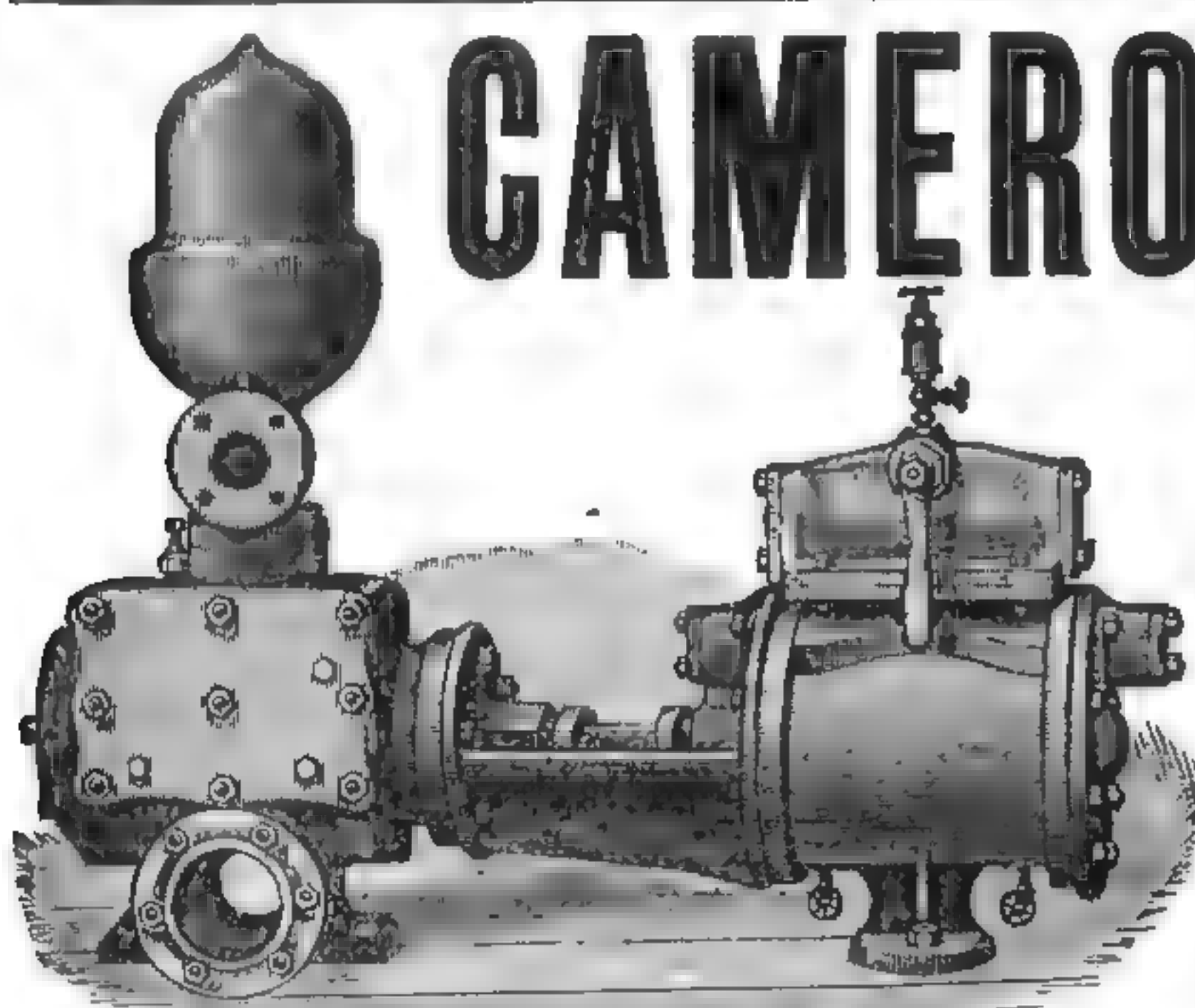
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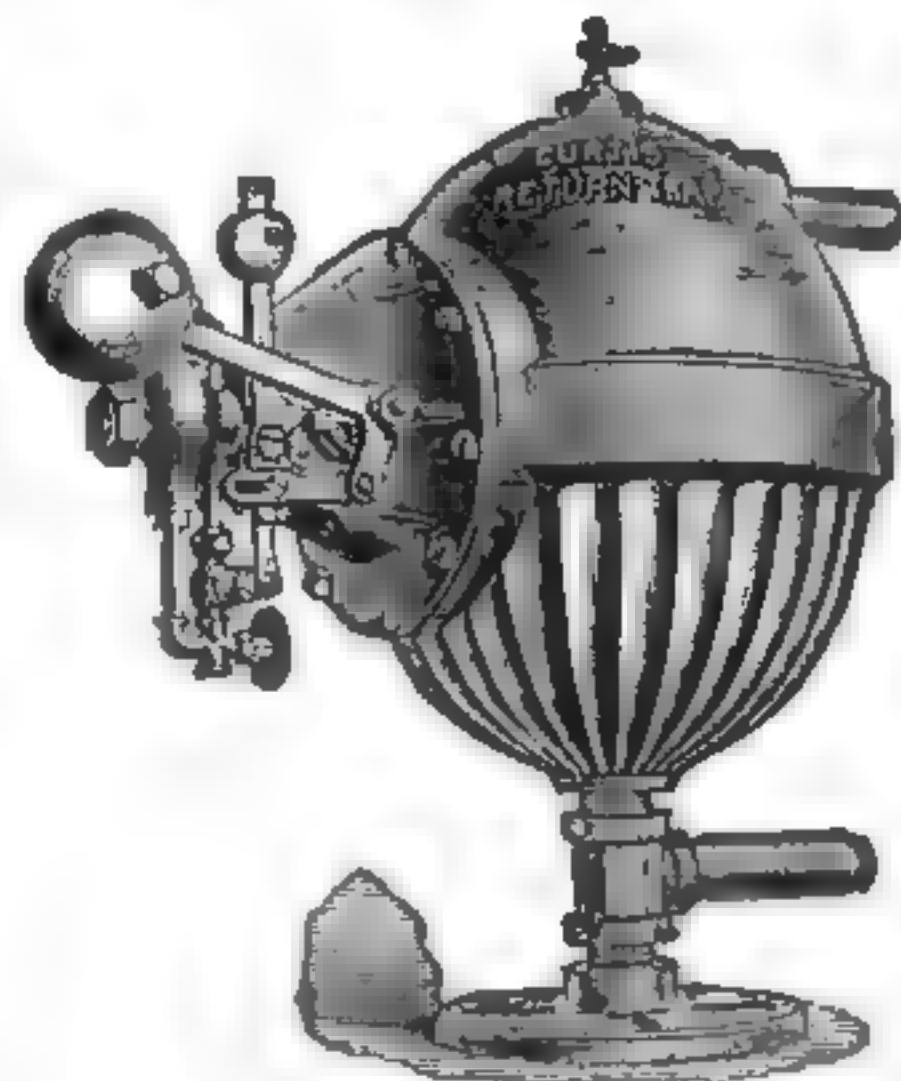
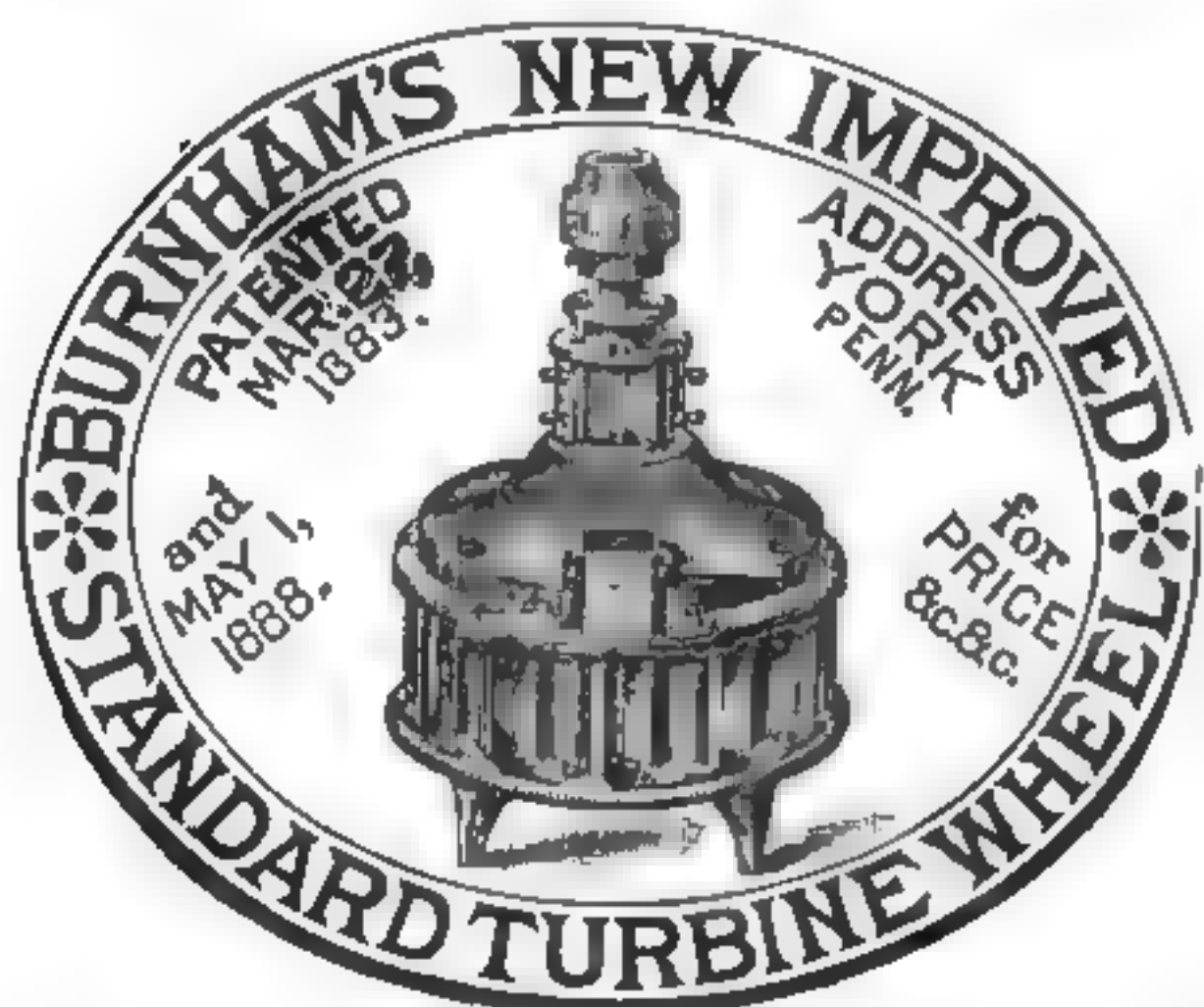
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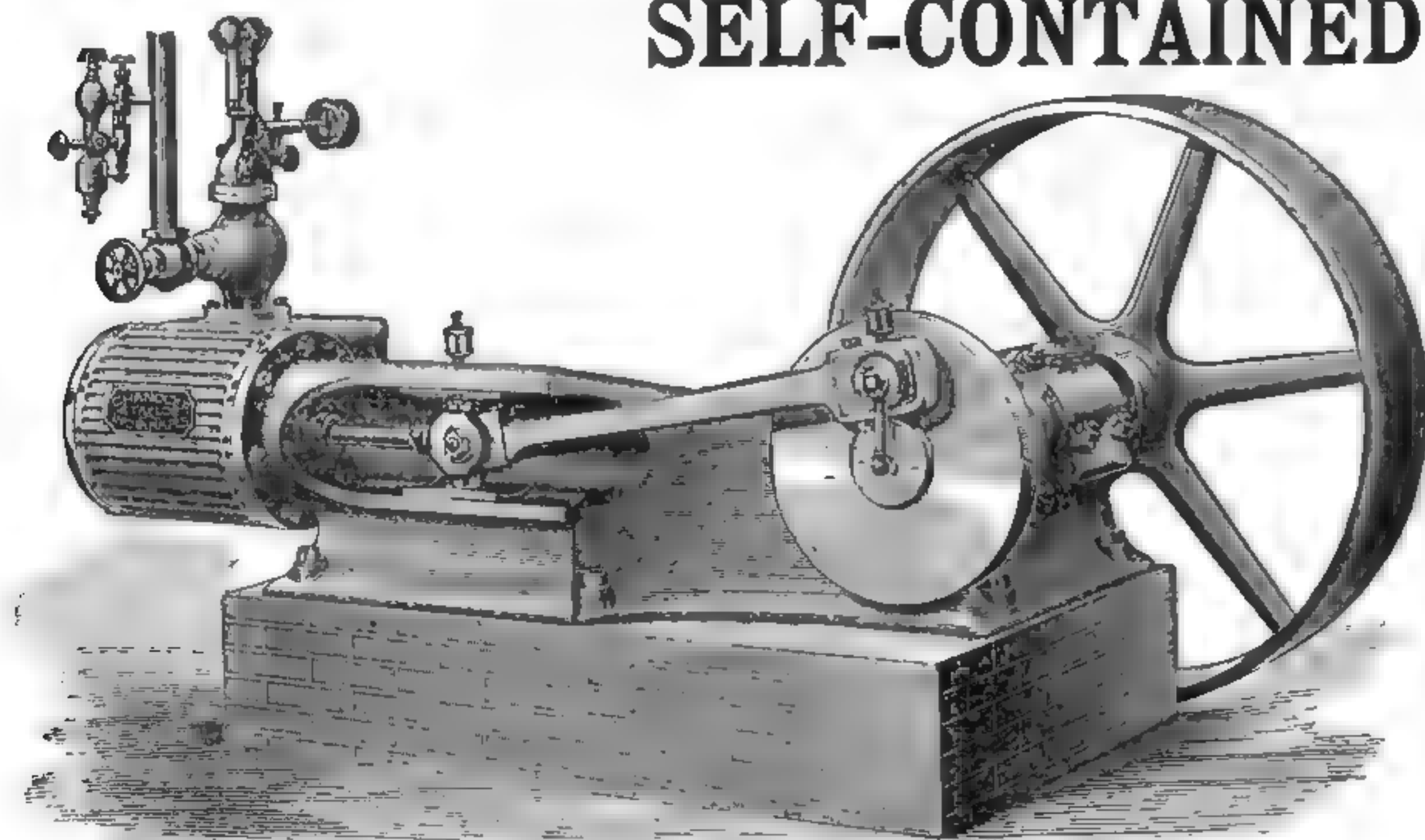
It is noiseless, positive, rapid, will return all condensation back into the boiler, and works equally well in connection with reduced pressure or exhaust steam, also when the return is below the water line of the boiler.

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NOTES & NEWS

Childress, Tex., men will build a flouring-mill.
 Hillsboro, Tex., men will build a roller flour-mill.
 U. Darby, Weverton, Md., puts steam in his flour-mill.
 C. Martin's grist-mill, Austin, Tex., burned; loss \$4,000.
 W. J. Lumpkin, Owensboro, Ky., remodels his flour-mill.
 The P. H. Postell Mill Co., Atlanta, Ga., built a flour-mill.
 Minneapolis is turning out nearly 120,000 barrels of flour a week.
 The Hawkinsville, Ga., Ginning & Milling Co. will build a grist-mill.
 Brown & Sallee, Buffalo, Ky., want machinery for a roller flouring-mill.
 Liquin's elevator, Dysart, Ia., burned: loss \$10,000; insurance \$4,500.
 Lockwood Bros.' elevator, Harlan, Ia., burned; loss \$5,000, insurance \$3,500.
 Jordan, Crampton & Co., millers, Berlin, Md., will put steam power in their mill.
 Leo & Clarke's flour-mill, LaCrosse, Wis., burned: loss \$25,000; insurance \$13,000.
 A. W. Martin, miller, Hagerstown, Md., sold his plant to J. W. Stone-breaker for \$5,000.
 J. G. Guthrie, Shelbyville, Ky., is repairing his idle flour-mill and will soon put it in operation.
 Ryerson & Son's flour-mill, Iowa City, Iowa, burned; loss \$15,000; insurance \$6,000 on the building.
 The Centennial Mill Co., Spokane Falls, Wash., incorporated, to succeed Pohl & Thompson, flour-millers.
 The three elevators of F. Strobbridge & Co., H. Kelly and Henry Hoover, Blue Hill, Neb., burned; loss \$50,000.
 Stanley & Hawkins' grist-mill, Alliance, O., was damaged several thousand dollars by a recent fire; fully insured.
 The Farmers' Milling Co., incorporated, at Lebanon, Tenn., will build a large flouring-mill. They want machinery.
 The Luray, Va., Flouring Mill Co. have sold out to W. M. Fielding and others, who will improve and operate the plant.
 The Van Deusen line of elevators, forty in number, along the line of the Chicago, Minneapolis, St. Paul & Omaha railroad, has been sold to an English and American syndicate, according to a Minneapolis report. The parties are the same ones who are negotiating for the big flouring-mills.
 The St. Louis United Grain Elevator Company, otherwise known as the "St. Louis Elevator Trust," was formally organized July 18 by the election of the following officers: President and General Manager, Webb M. Samuels; Vice-President, George W. Updike; Secretary and Treasurer, B. L. Slack. The company is capitalized at \$2,465,000, with a bonded indebtedness of \$1,200,000. The capacity of the consolidated elevators is 10,000,000 bushels.
 The National Pulley Covering Co., of Baltimore, Md., have recently received their fourth order for "Pulley Covering" from Marburg Bros., tobacco manufacturers of that city. It was over a year ago that the slipping of their belts became so bad that they were about putting in new shafting, pulleys and hangers at a great expense, when they were induced to try this covering, with so much success as to render such an expense unnecessary, and their continued orders since prove the confidence they have in it.
 The Avery Stamping Co., of Cleveland, Ohio, make the following announcement in a recent letter: "Mr. H. W. Caldwell, 131 and 135 West Washington street, Chicago, Ill., has taken the general agency in the west for our celebrated patent Seamless Elevator Buckets and will carry a full line of sizes in large quantities of the different styles of buckets, including the Avery-Caldwell patent corrugated bucket, which is pronounced by all users of buckets the finest bucket ever brought out. We would request our friends in the west to write to Mr. H. W. Caldwell for prices."

A report from St. Paul, Minn., dated July 21, says: A. L. Mohler, assistant general manager of the Manitoba Railroad, has completed a thorough personal examination of the wheat crop along the lines of the Manitoba system, and he has prepared a concise summary of the results of his investigations. In the last week he has examined all the country on the Northern and Dakota divisions and conversed with many farmers and elevator experts, and as the result he predicts that the country tributary to Manitoba lines will furnish for shipment at least 32,000,000 bushels of wheat. This estimate, he says, is confirmed by Chicago experts who have recently been covering the same territory independently of himself.

Says the Mauch Chunk, Pa., *Daily Times* of July 19: Paul Keefer, jr., who has for many years so ably conducted the steam mill in this place for Ario Pardee, and Mr. Keefer's clerk, Mr. Otto Ritz, have leased from the Hazard Manufacturing Company the old wire-mill building on West Broadway and its water-power for a term of five years. The old wire-mill building, idle for the past ten years or more, is to be remodeled and re-fitted for a chopping and flouring mill, and these gentlemen will succeed Mr. Pardee in the milling business in Mauch Chunk. In connection with the mill they will open a flour and feed store at some suitable point on Susquehanna street, and Mr. Keefer will in the future as in the past be the canal shipping agent for Mr. Pardee.

A report from Attica, N. Y., dated July 22, says: Loomis & Sons, principal bankers of Attica, Wyoming county, are charged by H. H. Eldred, manager of the Attica mills, with conspiracy to ruin the business of the mills, and damages are placed at \$100,000. The mills are owned by a stock company with head-quarters in New York. The company bought the mills a year ago, increased their capacity to 300 barrels a day and sent on Mr. Eldred as manager. A short time ago rumors were circulated that the mill company was shaky. A run on the mill followed. All bills were promptly paid. Mr. Eldred traced the rumors and had Mr. Loomis arrested on the ground that, as banker, he had allowed the mill's paper to go to protest when there was sufficient money deposited to cover the paper, that the brokers converted to their own use securities for which an accounting was refused and sent out notices to customers in regard to paying mill accounts at the bank that injured the mill company. At the examination Mr. Loomis refused to produce certain documents, and the case was adjourned. After the trial for conspiracy the civil damage suit will be begun. The mill was closed, but it has been put in operation again.

BOOKS AND PAMPHLETS.

The August number of *Scribner's Magazine* is a particularly rich and interesting one. The Frontispiece is a fine picture of Tennyson. Dr. James Dwight tells of "Form in Lawn Tennis" in finely illustrated article; Robert L. Stevenson contributes Chapt. X of "The Master of Ballantrae"; Robert Grant describes "Tarpon Fishing in Florida," fully illustrated; the other articles are "Memories," by Brander Matthews; "Nocturne," by Louise Imogen Gurney; "Electricity in Lighting," by Henry Morton, illustrated; "A Pagan Incantation," by H. H. Boyesen; "How to Feed a Railway," by Benjamin Norton; "The New Poverty," by George Parsons Lathrop; "A Monster of My Acquaintance," by E. C. Martin; "Tennyson's First Flight," by Henry VanDyke, and "The Two Locksley Halls," by T. R. Lounsbury. The whole number is of a rarely high order of excellence.

No one should travel without a reliable Railroad Guide. The information which it gives will often save a hundred times its cost. The best pocket guide for the Eastern, Middle and Southern States is the *TRAVELERS' READY-REFERENCE GUIDE* (formerly Appletons'), now known as the *RED GUIDE*, which is arranged especially for the convenience of travelers. Its index of stations refers directly to the page of the Guide upon which each station is shown in time-tables. It has a general U. S. Railway Map, a list of good hotels and a Tourist Guide, describing summer resorts and how to reach them. Being compiled in the office of the *OFFICIAL GUIDE*, its time-table information is always the latest. It can be bought for twenty-five cents from any news-dealer or will be mailed by the Knickerbocker Guide Company, 46 Bond Street, New York, on receipt of the price.



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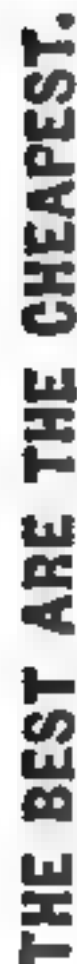
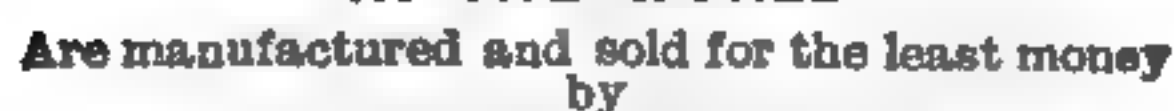
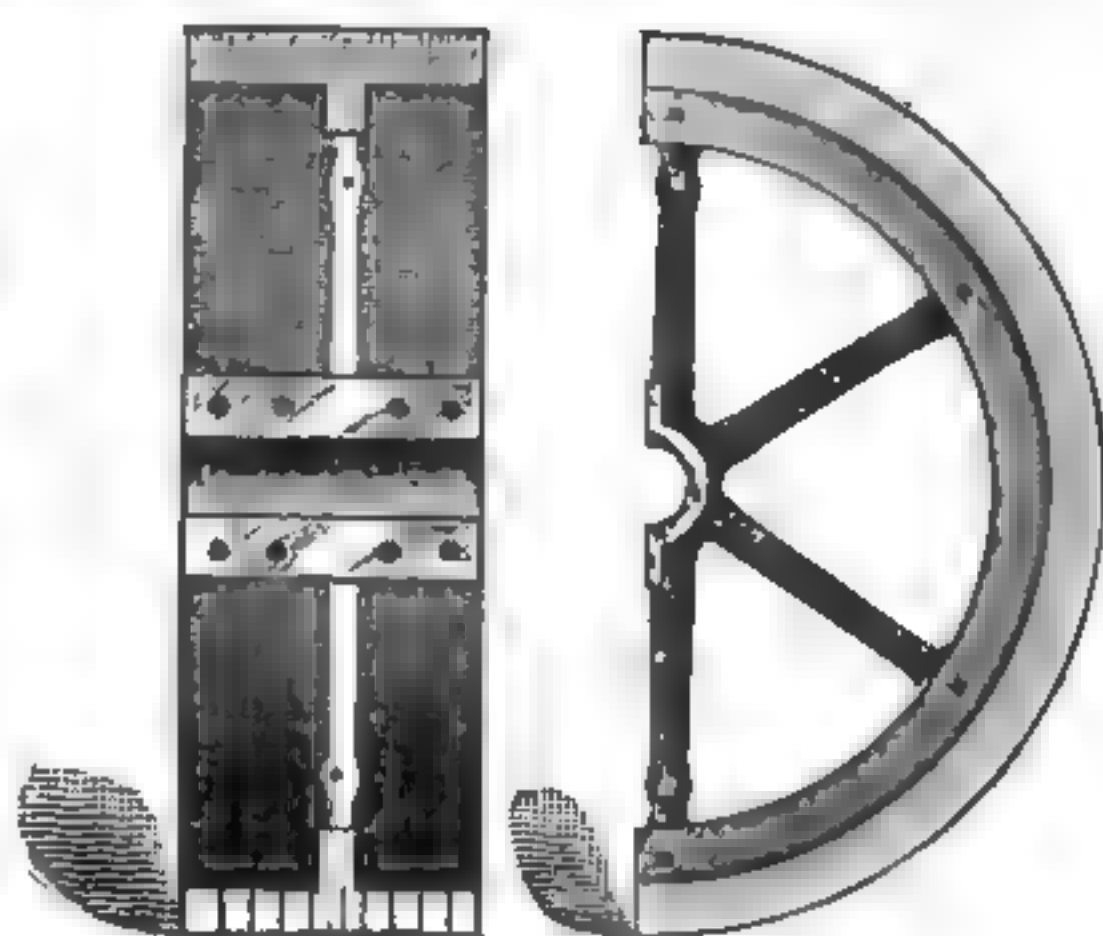
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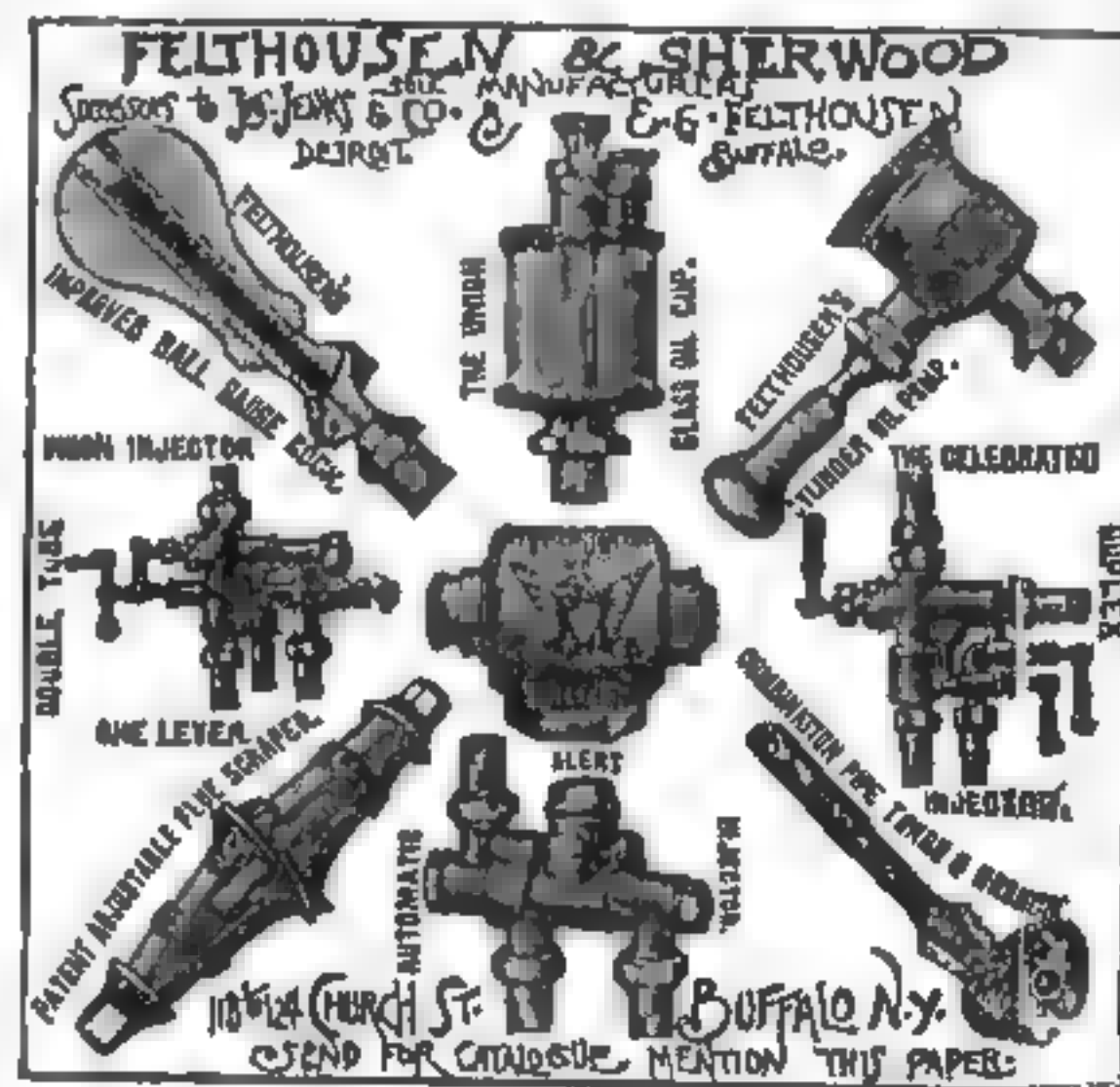
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EUROPEAN ECHOES.

THE first bread made in Paris from this year's wheat crop of Algeria was baked on June 28.

SAYS the London "Miller" of July 1: We understand that Mr. J. M. Case, of Columbus, Ohio, U. S. A., will read a paper at the approaching Convention on "Turning Points in Scientific Milling."

LATE reports from Australia state that the favorable aspects of the season continue and good rains had fallen. A very large area of wheat has been sown, and such a splendid season has not been known for a long series of years.

THE harvesting of rye in France is over and the crop secured under favorable circumstances. The average rye crop of France is about 80,000,000 bushels. The production of rye last year was unremunerative to the grower, owing to its competition with maize, which is imported free of duty, and the same is likely to occur again this year.

EXPERIMENTS were commenced four years ago in several places, differing in soil and climate, says a Paris correspondent for the purpose of determining the productive merits of the square-eared wheat as against the common sorts. A report recently issued states that the average yield in 1888 of the square-eared variety amounted in the South of France to 29 hectolitres per hectare, against 20 hectolitres for the common sorts. In Central France, the ordinary yield being 27 hectolitres, the square-eared variety gave 36 hectolitres; and in the North, where the common kinds yield 41 hectolitres, the square-eared produced 49 hectolitres. In these times of agricultural depression a difference of this magnitude is of great importance.

ON July 1 the general European crop condition appeared to the London "Miller" as follows: Deficient crops are expected in Austro-Hungary, in the north-east of Germany, as well as in Russia. In the latter country recent rain has improved the harvest prospects. Full and good wheat crops are expected in France, North Germany, Holland, Belgium and in these islands. The storm period which lately did mischief on the Continent has now ceased, and recent weather has augmented the grain crops generally, at the same time rapidly maturing them. The commencement of harvest in July may now be generally expected, while, should the wheat be secured dry, its quality is expected to be fine and make it in full request.

FOLLOWING is an astonishing letter sent by "A Canadian Miller" to the London "Miller" of July 1: The prospects in the Northwest are the best possible, and a harvest is predicted which will be the best known in the history of Manitoba; about 25 per cent. more land under wheat cultivation this year. On the strength of the above report flour has tumbled down

50 cents per barrel. Some millers have succumbed, and a lot of dealers also. Many banks have a large quantity of grain to sell, which will make things worse than ever for the bulls. The big guns of America misled the small fry and kept a large stock of wheat. The Europeans not being compelled to give their prices, there was no opening outside, consequently a great disaster has set in. Although we have a 50 cents duty per barrel against the millers, they are pouring flour into Canada at a great loss, thinking, I suppose, that the first loss is the best. I believe we shall have prices lower than ever. - People here think America is the whole world; they know nothing about Russia's position in the wheat market, nor that the English miller can make flour from Indian wheat. The manufacture is going ahead here; the grinders have discovered that but three breaks are required, and so are doing 30 to 50 per cent. more for the same power.

SAYS the London "Miller" of July 8: Over the land of Europe at this date the corn is maturing and offers a magnificent landscape of plenty to the eye of man. Apparently Hiawatha in June passed through and blessed the cornfields of America and parts of Europe. Such favorable weather as we have lately had is a happy exception to the rule. The prospects are fair, and it may be hoped they will be realized in the harvest gathering. It may also be hoped market opinion may be able to fix rates that may avoid immoderate cheapness, for which, indeed, there is not, and in the past has not been, any good reason. The world does not grow enough for 15 months' consumption but yields usually enough for 12 months, until from seed time harvest comes again. Better quality of wheat this year is expected than that of last season, and on this account improved samples should bring improved prices. In the past week perhaps the chief action taken on the part of flour-holders was in putting up Hungarian flour 2s. per sack, owing to lower prospects of harvest in Central Europe. Some other sorts of flour have also been harder to buy 6d. to 1s. per sack. Some country millers hold for 23s. 6d. where in June 22s. 6d. per sack was accepted. Belgium and Holland have quiet corn markets, under the influence of favorable harvest prospects. France has lately favored buyers of flour, but for this article and wheat there is a good demand. The French rye crop is being cut and is reported a good yield; and of both wheat and barley a full out-turn of good quality is expected. Germany has advanced the price of rye 2s. 6d. per quarter from its lowest point, and so wheat is irregularly dearer, making 32s. to 40s. per quarter, although harvest prospects are reckoned fair.

MILLING journalistic opinion appears to be unanimous concerning the Millers' National Association. It is fair to assume that the members of the Association are quite as unanimous concerning the milling press. It's a clear case of quits, but the association seems to be doing the quitting, while the milling journals stay right on, conduct themselves properly and grow wealthy and contented. Who would be a Millers' National Association? Who would n't be a milling press in preference? All answer at once:

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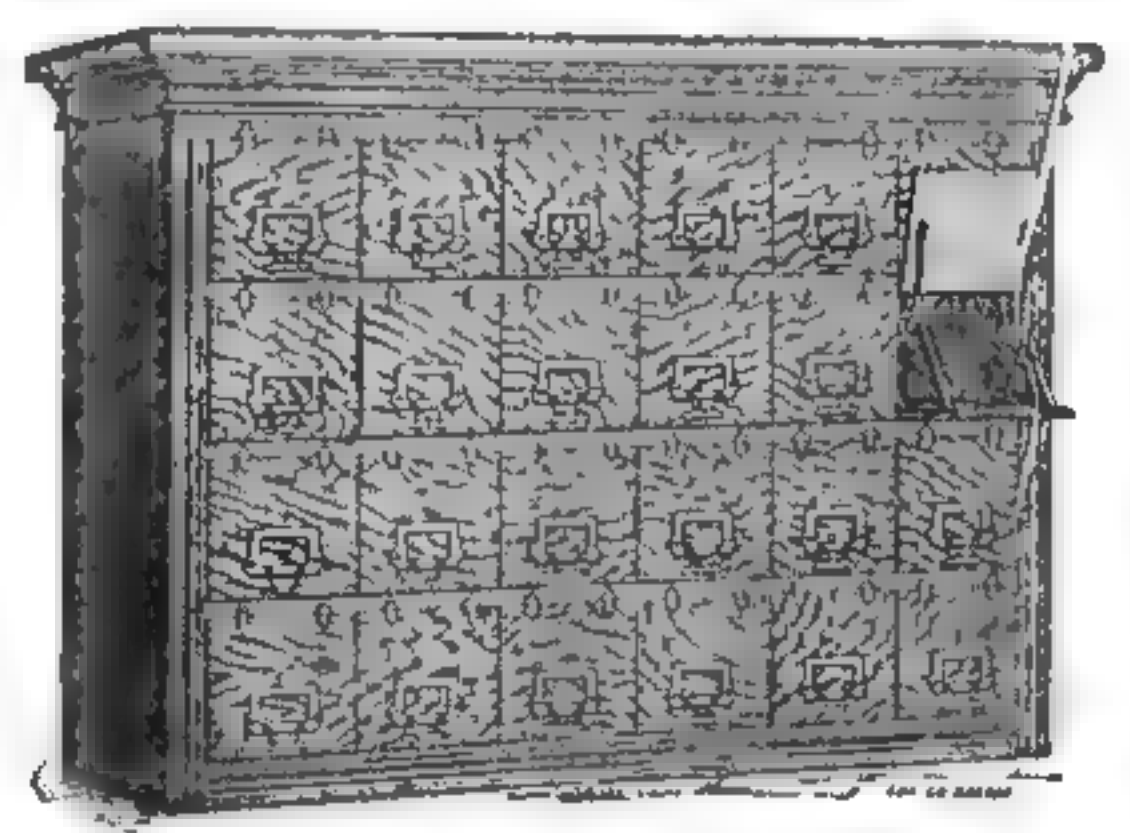
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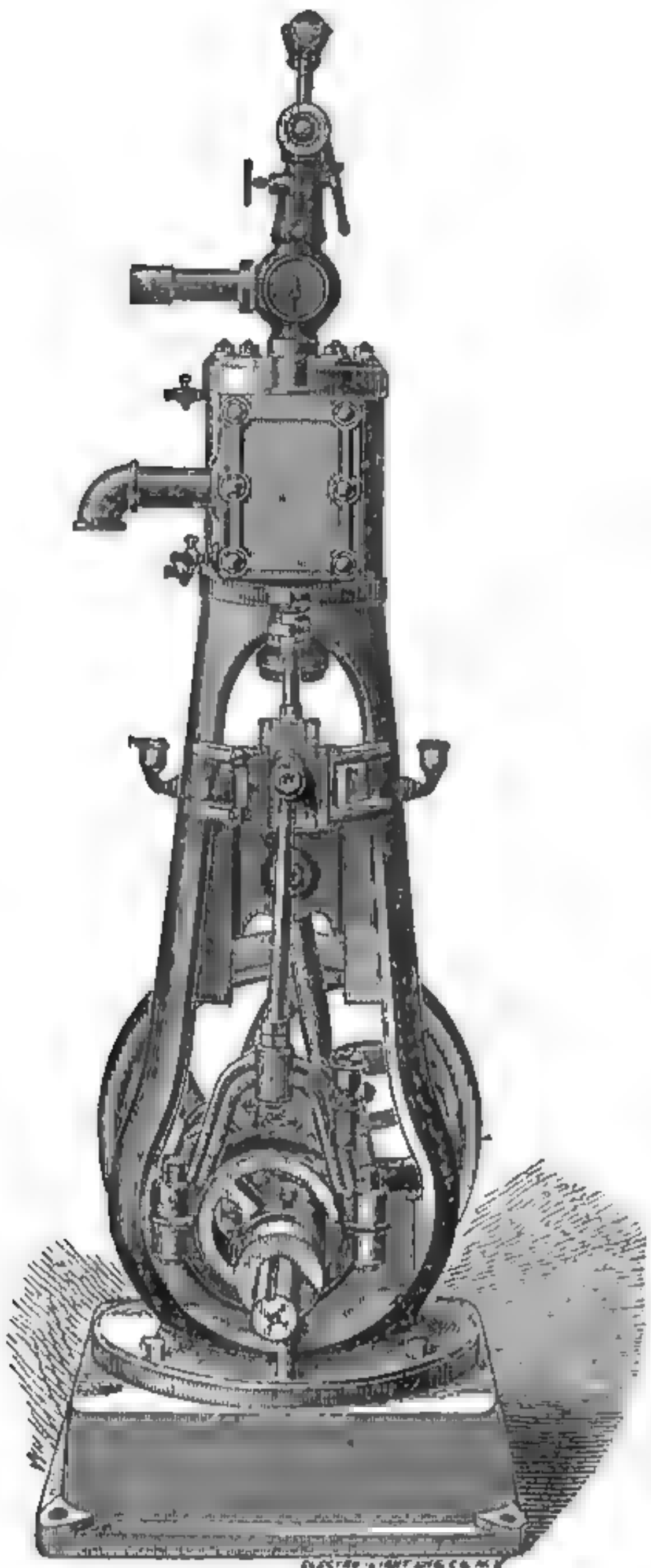
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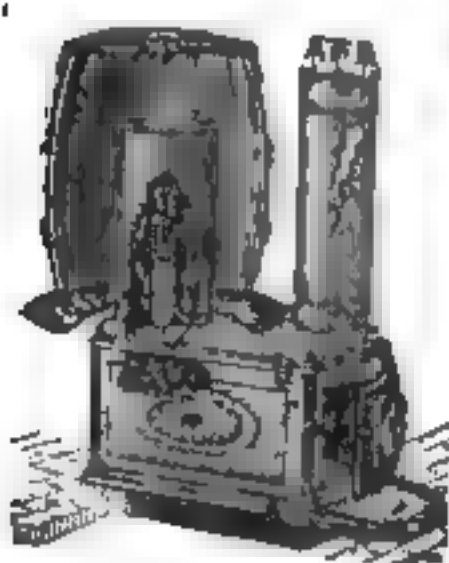
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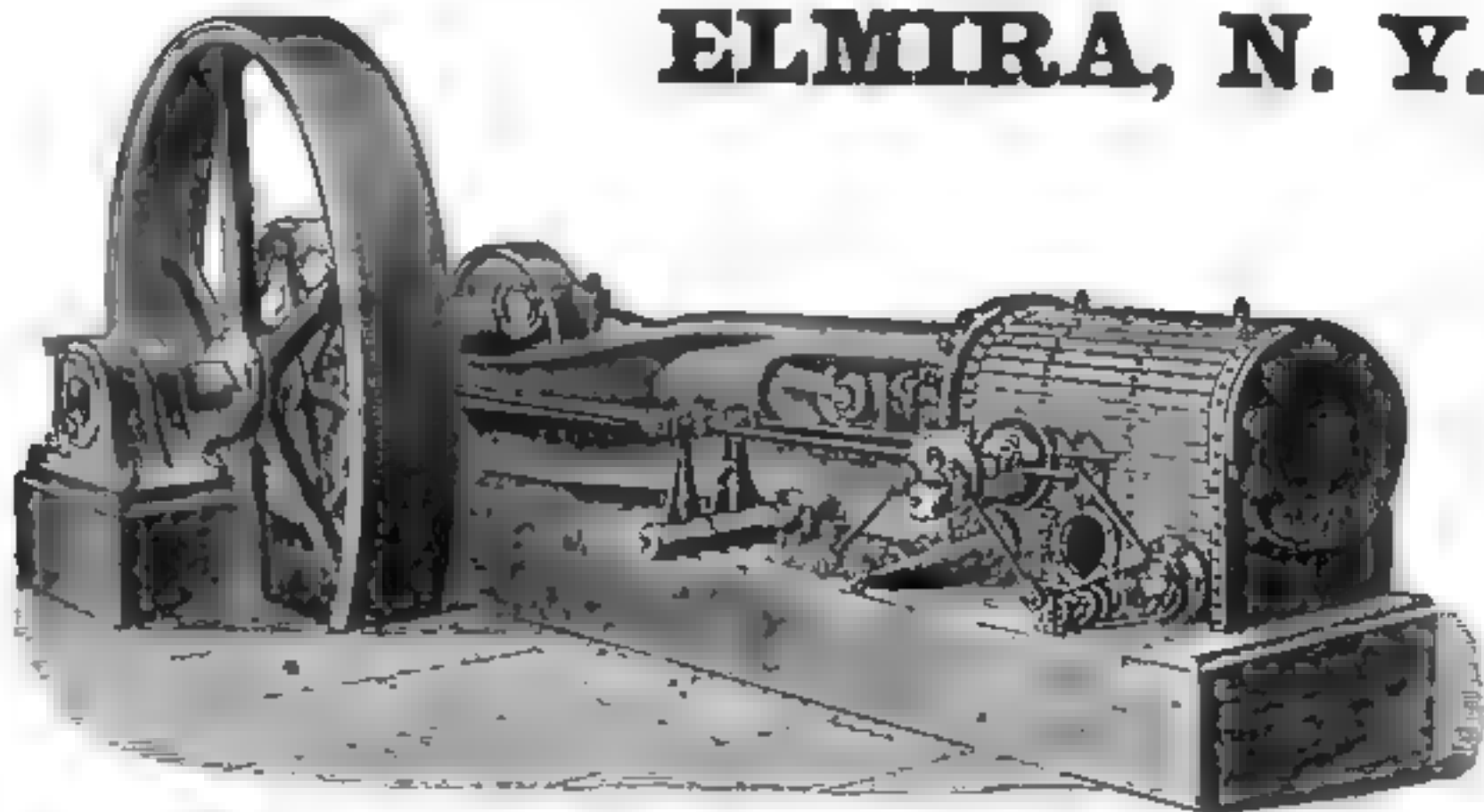
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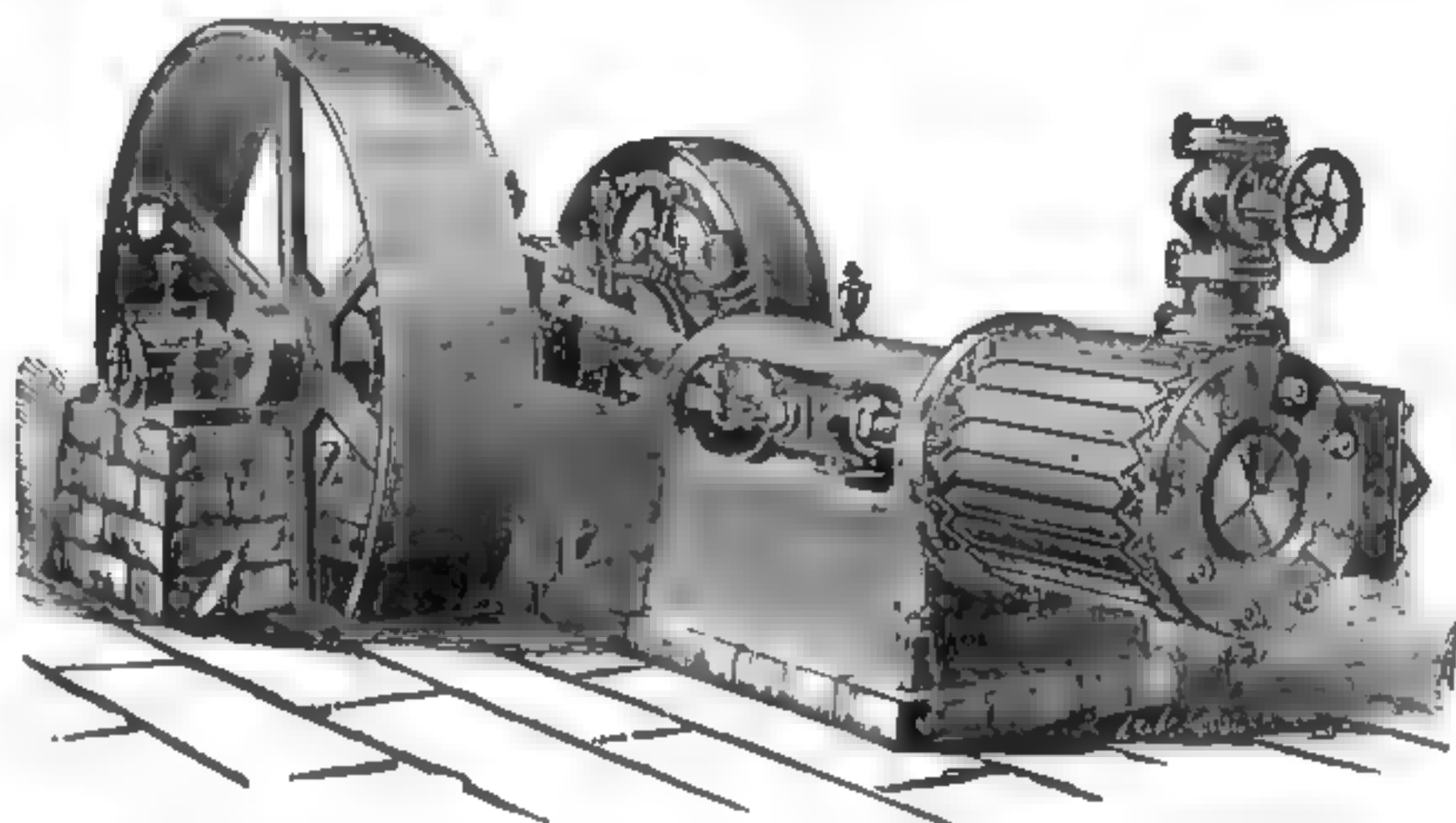
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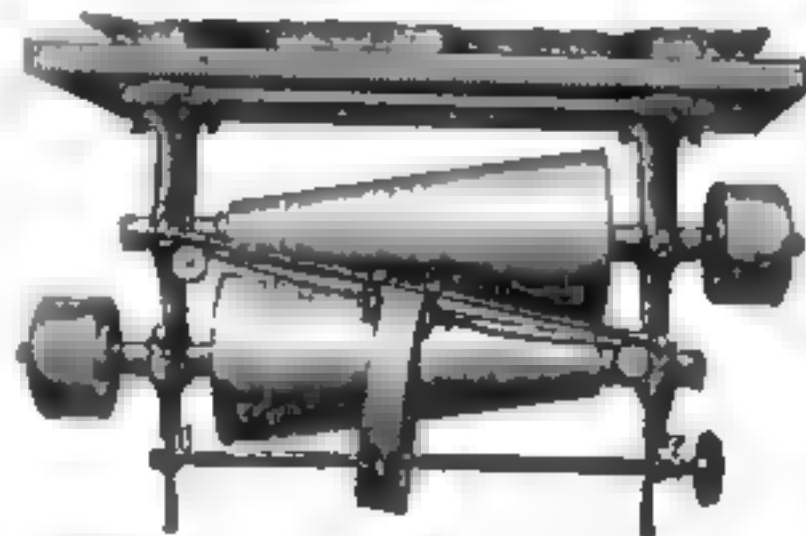
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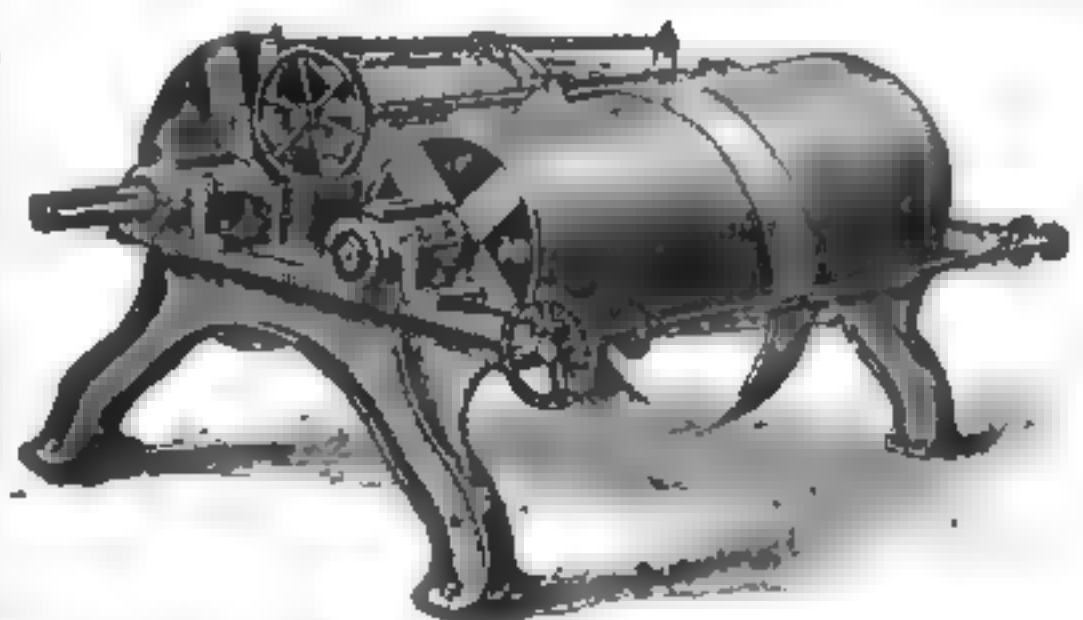
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OFFICE OF THE MILLING WORLD,
BUFFALO, N. Y., July 27, 1889.

Friday of last week was a day of scalping markets, dull, steady and featureless. July wheat closed at 88½c. Options 1,250,000 bushels. July corn closed at 43c. and oats at 27¼c. Wheat flour was dull and generally unchanged. The other lines were featureless.

Friday brought better western weather reports and larger receipts of wheat, and the markets went dull and weaker. July wheat closed at 87½c. Options 864,000 bushels. Chicago reported the opening sale of No. 2 red wheat of the new crop for export from that market, 2 boat-loads being taken. July corn closed at 43½c. and oats at 27½c. Wheat flour was dull and nominal, with no changes quoted, and with only small sales reported. The minor lines were quiet.

Monday brought less favorable crop reports from Europe, which checked a decline in wheat. The market was irregular. July wheat closed at 87½c., after once reaching 88c. Options 2,680,000 bushels. Some wheat was taken for export. July corn closed at 43½c. and oats at 27½c. Wheat flour was devoid of interesting features. Prices were unchanged. Trade was moderate. The other lines were featureless. The visible supply in the United States and Canada was:

	1889. July 20.	1888. July 21.	1887. July 23.
Wheat.....	12,194,470	21,664,810	32,021,051
Corn.....	7,900,587	8,389,857	7,879,200
Oats.....	4,673,883	3,025,783	1,971,667
Rye.....	821,084	135,359	236,392
Barley.....	377,605	151,426	128,230

Tuesday brought bad weather reports from every part of Europe, better cables and increased export demand, and, notwithstanding the belief that the weather reports were exaggerated, the wheat market was higher all day. July wheat closed at 88c. Options 6,520,000 bushels. Export enquiries were numerous and good purchases were reported. Some of the reports from Europe were as follows: Paris, France—Our market very firm. Prospects of the crop becoming less favorable in France; also the prospects of a small crop in Hungary. The same may be said of Russia and Danubian States. We believe in higher prices. Weather in England and France is unfavorable. We think they may be somewhat colored, but are in the main correct. Their Berlin cable said: Germany—Prospects of crop unfavorable. South Russia—Market excited. A large portion of the crop destroyed. Austria-Hungary—Advancing. France and the United Kingdom—Prospects of crop becoming less favorable. Danubian States—Advancing, in sympathy with other markets. July corn firmed up to 44c. at closing. Options 1,032,000 bushels. July oats closed at 27½c.

Wheat flour was dull at unchanged prices, despite the strength in wheat. Trade was generally quiet. The minor lines were featureless.

Wednesday brought renewed and confirmed reports of bad weather in Europe. Great Britain reported wet and cold weather, which retarded the growth of crops. July wheat closed at 87¼c. Options 8,000,000 bushels. Considerable export sales were reported. All the strength came from the European side, as the improved home spring-wheat conditions tended to weaken the markets. July corn closed at 43¼c. Trade was fair. July oats closed at 27½c. Rye grain was nominally as follows: State afloat 53½c; Western 52½c; track lots near-by 50x51c. and c. l. f. Western 51c. Malt dull, steady and unchanged. We quote Canada at 95c. for country to \$1.05 for city made; six-rowed state 85½c; four-rowed do 80½c; Western 60½c. Mill feed is firm

and quiet, at the following quotations: 40 lbs, 62½c@67½c; 60 lbs, 60c@62½c; 80 lbs, 62½c@67½c; 100 lbs, 75c@80c, including sharps.

Wheat flour showed more firmness and activity, particularly on new and old high-grade winters, both for home and export trade. Exporters took large quantities, and large western export deals were reported. The quotations were as follows:

SPRING FLOUR.		
	Sacks.	Barrels.
No grade.....	\$1.75@1.90@.....
Fine.....	2.10@2.20	2.25@2.60
Superfine.....	2.30@2.60	2.70@3.10
Extra No. 2.....	2.95@3.25	3.15@3.40
Extra No. 1.....	3.40@3.80	3.65@4.30
Clear.....	3.50@3.80	3.80@4.05
Straight.....	4.30@4.80	4.55@5.30
Patent.....	5.55@6.05	5.55@6.40

WINTER FLOUR.		
	Sacks.	Barrels.
No grade.....	\$1.90@2.00@.....
Fine.....	2.40@2.50	2.50@2.65
Superfine.....	2.60@2.90	2.90@3.15
Extra No. 2.....	2.80@3.05	3.00@3.25
Extra No. 1.....	3.65@4.55	3.85@5.05
Clear.....	3.80@4.30	4.20@4.65
Straight.....	4.45@4.80	4.70@5.05
Patent.....	4.65@4.95	5.15@5.55

CITY MILLS.		
	Sacks.	Barrels.
W. I grades.....	\$4.45@4.70@.....
Low grades.....	2.55@2.80@.....
Patents.....	5.55@6.00@.....

Rye flour was featureless at \$2.70@3.00. Corn products were firm and in fair demand at the following quotations: Coarse meal 84c@86c; fine yellow \$1; fine white \$1.05@1.15 for city stock; Brandywine \$2.75; Southern and Western \$2.60-@2.75; grits \$2.60@2.70; hominy grits \$2.70@2.75 in barrels, \$1.20 in sacks; granulated brewers' meal \$1.20 per 100 in sacks. Corn flour \$2@3 for bbls; chops 60c@65c.

Thursday brought steady and active markets. July wheat closed at 87½c. Options 7,100,000 bushels. July corn closed at 43½c. and oats at 27½c. Wheat flour was steady and unchanged. The other lines were featureless.

BUFFALO MARKETS.

WHEAT—There was but little inquiry for spring wheat to-day, although limits were reduced 1c on new No 1 hard wheat, making the price 25c over Chicago July, or \$1.07@1.07½; old No. 1 do still remains unchanged at 44c over. There were no sales of any importance reported. At the close new No 1 hard was quoted at \$1.26½; new No. 1 do at \$1.07½, and old No. 1 Northern at 98c. Winter wheat in fair demand, but market unsettled; sales were made of 8 carloads choice No. 2 red at 95½c on track, 2 do No 1 white at \$1.01 on track and 2,100 bu No. 8 red at 87½c; No. 2 red was offered later in the day at 95c, No. 2 do Chicago at 91c in store, and No. 3 extra red at 84c. **CORN**—In fair demand, but market lower. The market opened firm, with a few sales at 41c, but later declined ½c, and at the close was fully ½c lower than at the opening. Sales comprised: 20,000 bu No. corn at 49½-@41c, and 5 carloads No. 3 do at 40½c in store. These two grades are about the only ones in the market. **OATS**—Quiet, No. 2 mixed was quoted at 27@27½c on track, No. 2 white at 31c in store, do do choice at 32½c on track, and white State oats from farmers wagons at 35@36c. **CANAL FREIGHTS**—Firm. Rates of freight on wheat to New York 8½c, on corn 8½c, on oats 2½c, and on rye 8½c; lumber rates to New York \$2.25, to Albany \$1.75. **RYE**—Dull at 47½-@48c for No. 2 Western. **FLOUR**—City ground—Patent spring, \$6.00@6.25; straight Duluth spring, \$5.75@6.00; bakers' spring, best, \$5.50@5.75; do rye mixture, \$4.75@5.00; patent winter, \$6.00@6.25; straight winter, \$5.00@5.25; clear winter \$4.75@5.00; cracker, \$4.75@5.00; graham \$4.75@5.00; low grade, \$3.00@4.00; rye, \$3.25@3.50 per bbl. **OATMEAL**—Akron, \$6.00; Western \$5.75 per bbl; rolled oats, in cases, 79 lbs \$3.25. **CORNMEAL**—Coarse, 80c@85c; fine, 85c@90c; granulated, \$1.50 per cwt.

WHEAT HAS A NEW DISEASE.

Wheat-growers have a new trouble to contend with. A letter from Indianapolis, Ind., under date of July 13, makes the following announcement: Horace E. Stockbridge, Ph. D., director of the Government Agricultural Experiment Station for Indiana, located at Purdue University, near Lafayette, has been investigating a new wheat disease that has appeared in certain parts of the state, particularly in La Grange county, and which is seriously affecting the wheat crop over considerable areas. The disease is a fungoid growth known as "bunt," or "stinking smut," on account of its strong and disagreeable odor. It is rarely found in America, but is not uncommon in England. The wheat head on ripening may possess a very nearly normal appearance, but on shelling the grains are found to be filled with a black, greasy powder, the result of the growth of the fungus,

beginning with the very germination of the seed and keeping pace with the growth of the plant. Its action is no more harmful than that of common smut, but its odor renders it more objectionable. Where not very abundant, it may be separated from the good grain, either by fanning or by washing. It is very apt to occur so abundantly in a field as to render the entire crop well-nigh worthless. It does not spread in the field, but the germs producing it adhere to the grain and are thus sown with the seed. Seed wheat may be freed from the spores by being soaked in a solution of blue vitriol (sulphate of copper) for thirty-six hours, four ounces of the sulphate to one gallon of water.

GOOD NEWS FOR WHEAT-GROWERS.

Wheat-growers will be pleased to learn that an enemy to the chinch-bug has appeared, that is likely soon to destroy the pests entirely. Prof. J. H. Snow of the State University of Kansas is the discoverer. He has been investigating the chinch-bug for some time with great care and has found that a disease has made its appearance among them which is thinning their ranks rapidly. He has made a number of visits to the fields and found the live and healthy bugs rather scarce. In many places the ground is almost white with dead bugs. They are dying very rapidly with a disease which he terms white fungus, but many entomologists call it chinch-bug cholera. The disease is very contagious. Nothing is known of the cause of the disease nor of its symptoms, but it is doing a good work. To test whether it is contagious, Professor Snow shut up a number of healthy bugs with a few dead ones, and they all died with the same disease, apparently. An entomologist of Minnesota acclaims to have sent over 20 boxes of dead bugs last season with a view to scattering the disease with the desired results. Professor Snow says that any field can be cleared of the bugs by scattering a few dead ones therein. The disease is prevalent, Prof. Snow says, all over the West this year.

Says Chicago *Daily Business*: But it is not the fact that millers as a body have any antipathy to boards of trade, or to dealing in futures; for it is well known that as a class, they, more generally than any other, patronize the commission merchants of the Chicago and other exchanges. And they find the facilities afforded by those outgrowths of commerce of the utmost use in the prosecution of their own proper affairs. The opportunities for selling short enable the miller to carry a stock of wheat in his own mill or warehouse without cost to himself, by a sale for future delivery, the purchaser of which as a rule pays him very handsome carrying charges. In purchasing his wheat he can, on such a market as Chicago affords, seize any moment he may consider most appropriate to buy at once enough for his season's grinding, not that he must necessarily grind the identical wheat bought in this market, but as the value of wheat in the country is fixed by the fluctuations at this, the leading center, he has, if his judgment was sound, bought at the minimum figure of the year, and can sell out his Chicago holdings as soon as he is able to duplicate them in his own limited market. The farmer as well as the miller is benefited by an open market where he can at any moment of any business day of the year, dispose of his crop for future delivery, the purchaser meanwhile usually paying a handsome premium for having it held in the farmers' barn until the maturity of the contract, English, French, and other European importers of Indian, Australian and Californian wheat can minimize their risk, and are in the habit of doing so, by selling in the Chicago market against their distant purchases. They earn in this way the carrying charges on their property, which in some instances is six months in reaching them, and they are enabled also to sell out at a moment's notice should any unforeseen event give an upward but transitory stimulus to the market.



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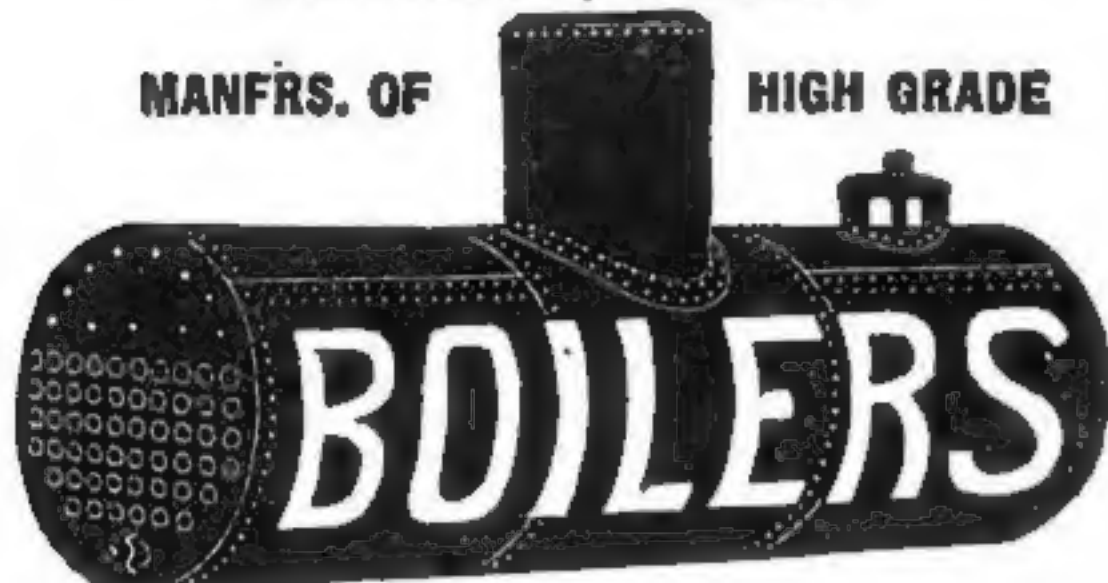
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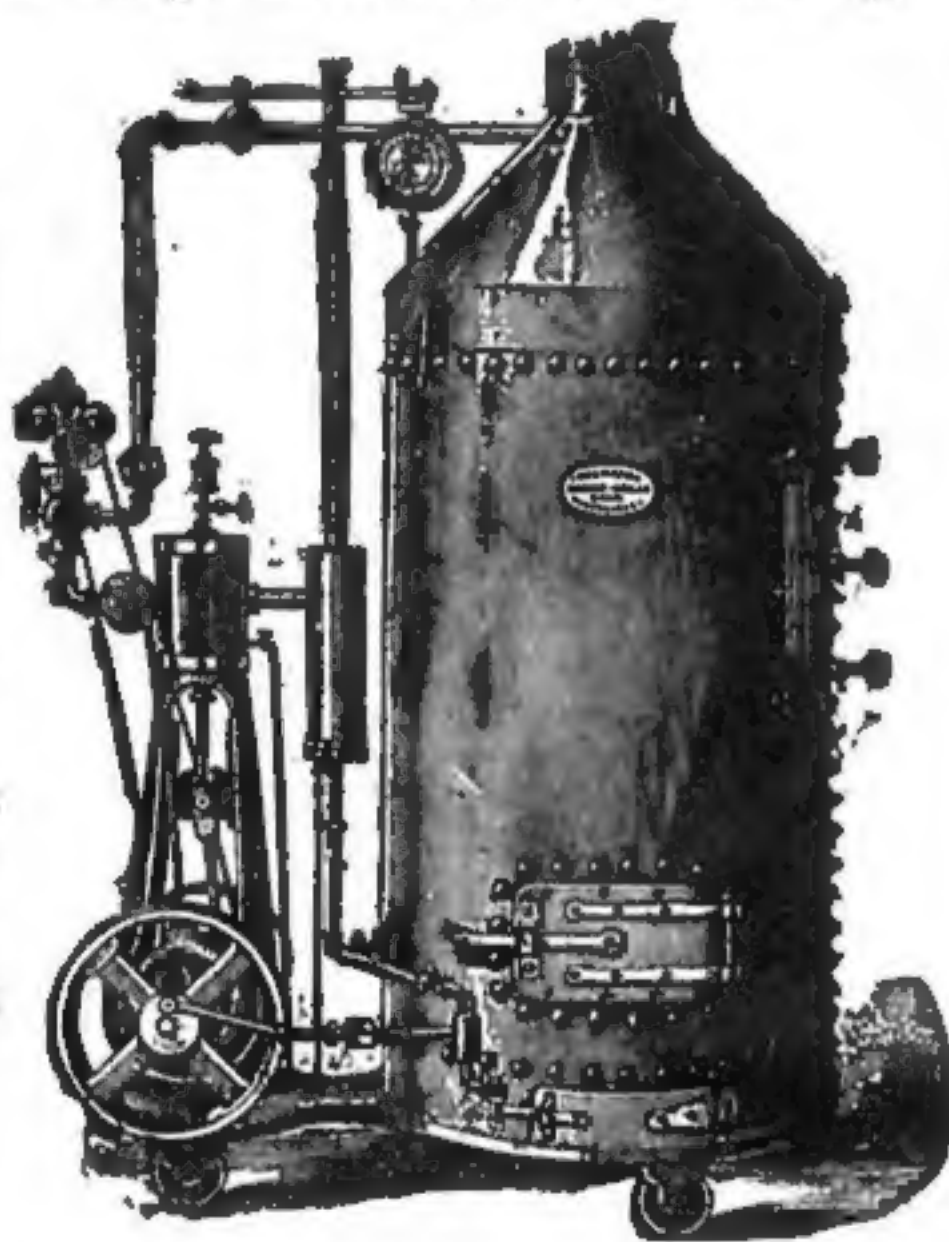
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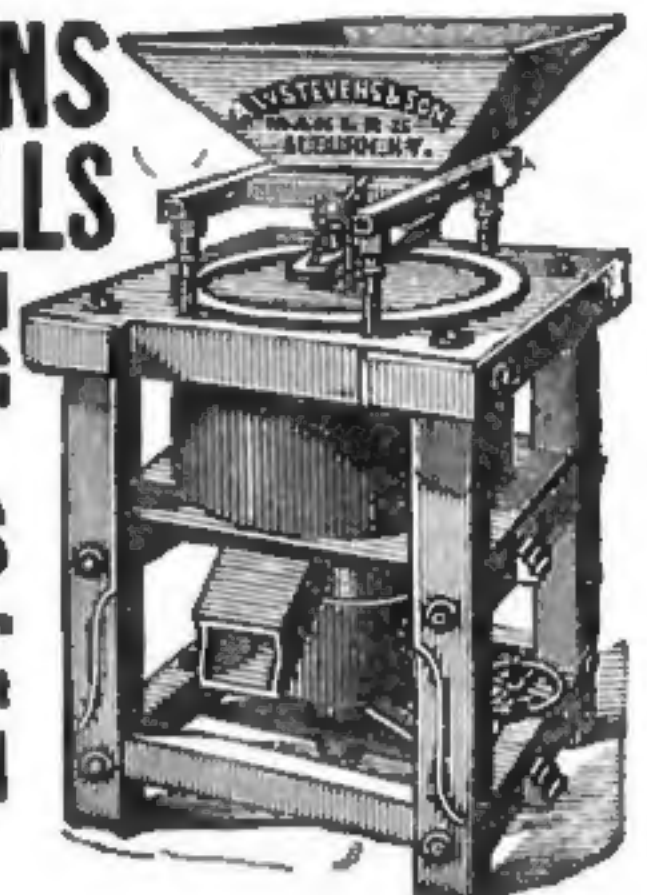
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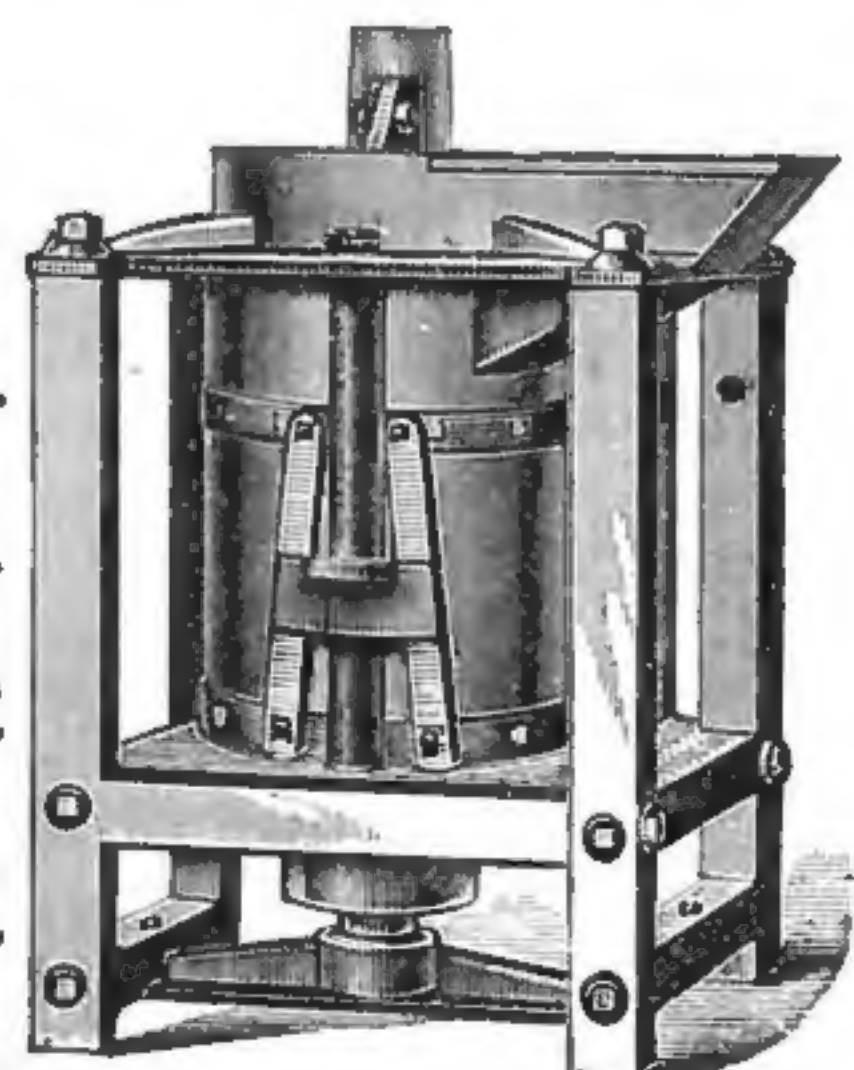
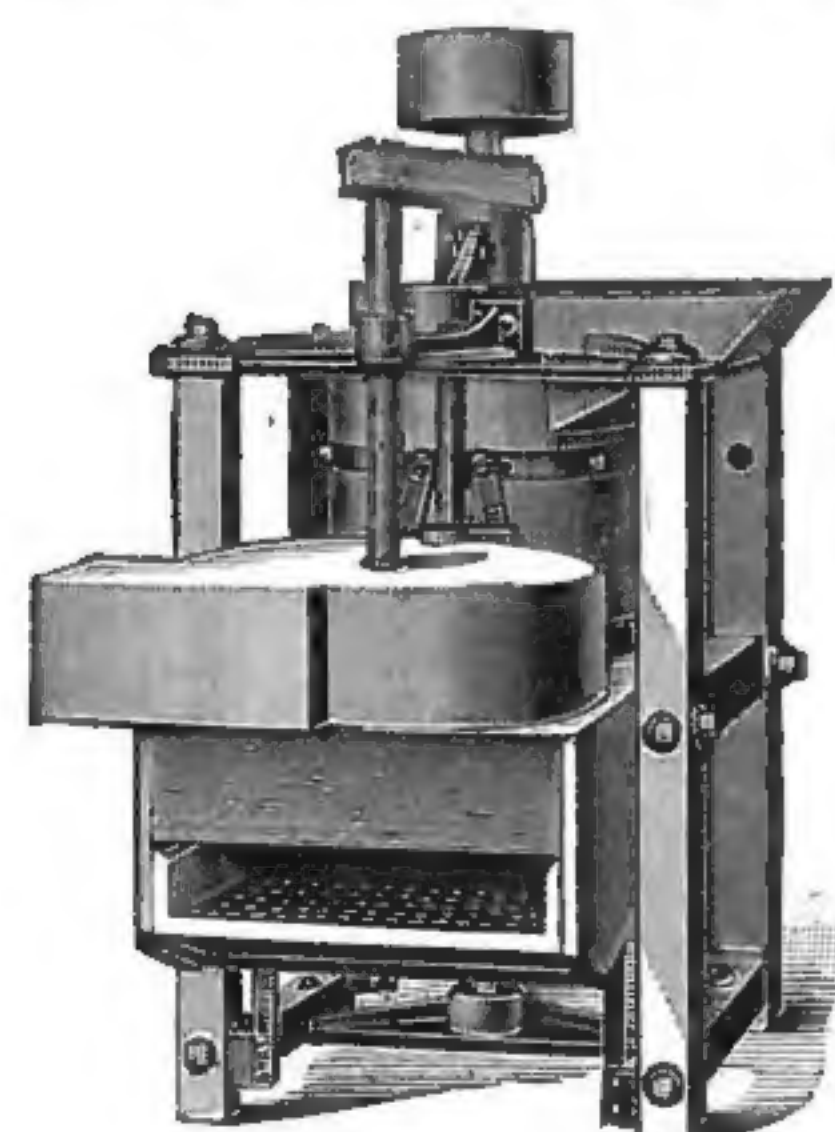
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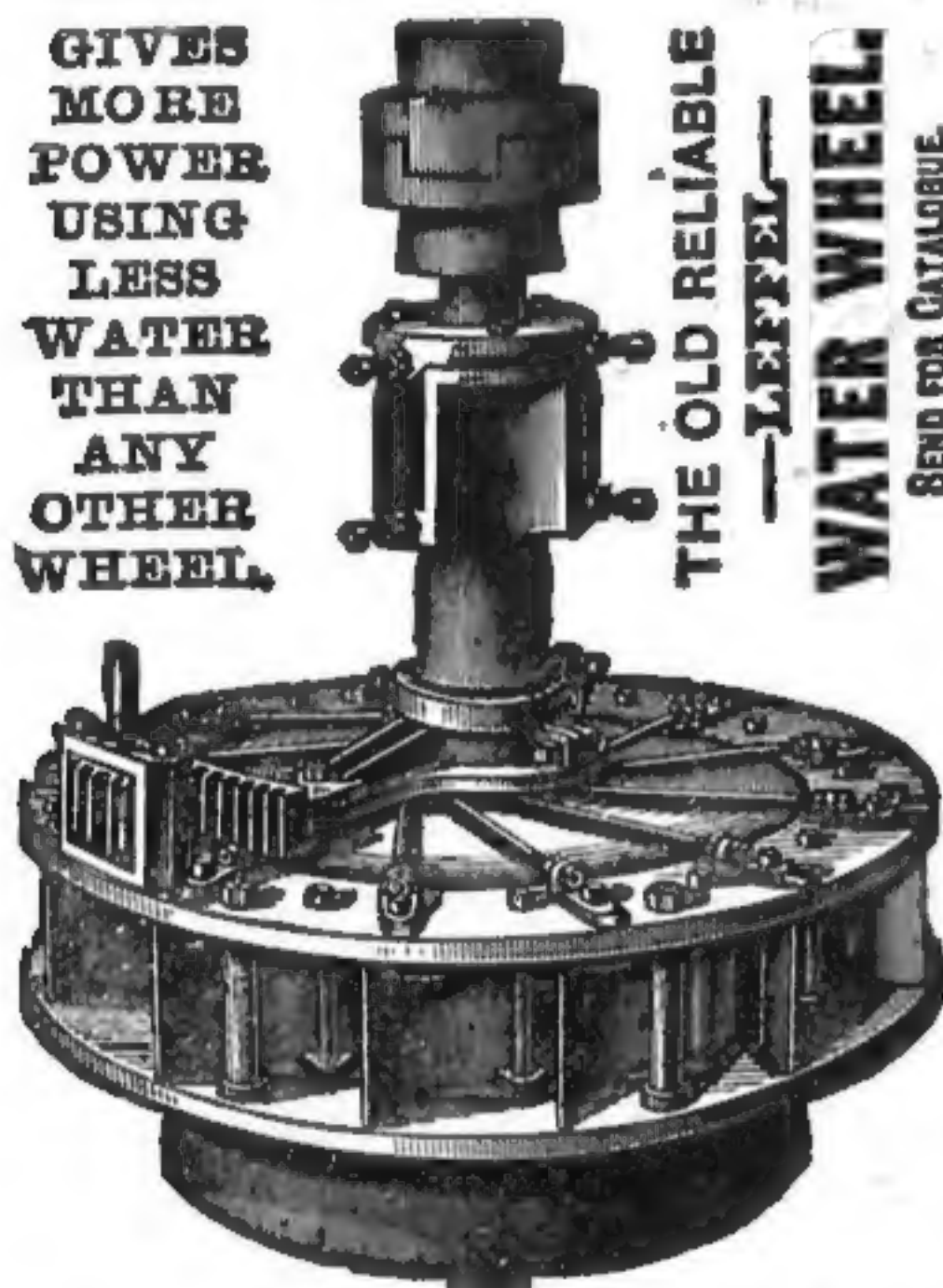
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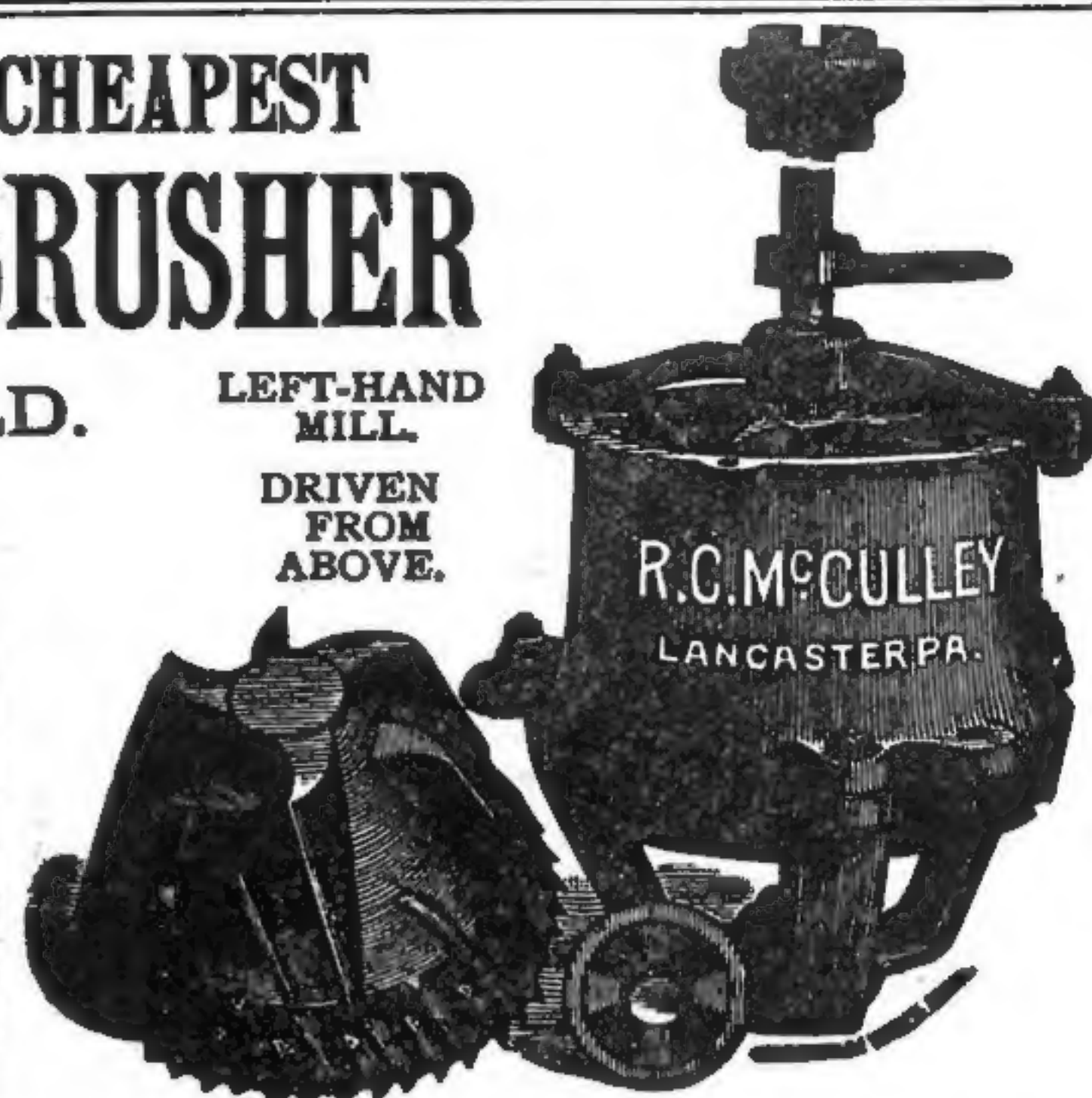
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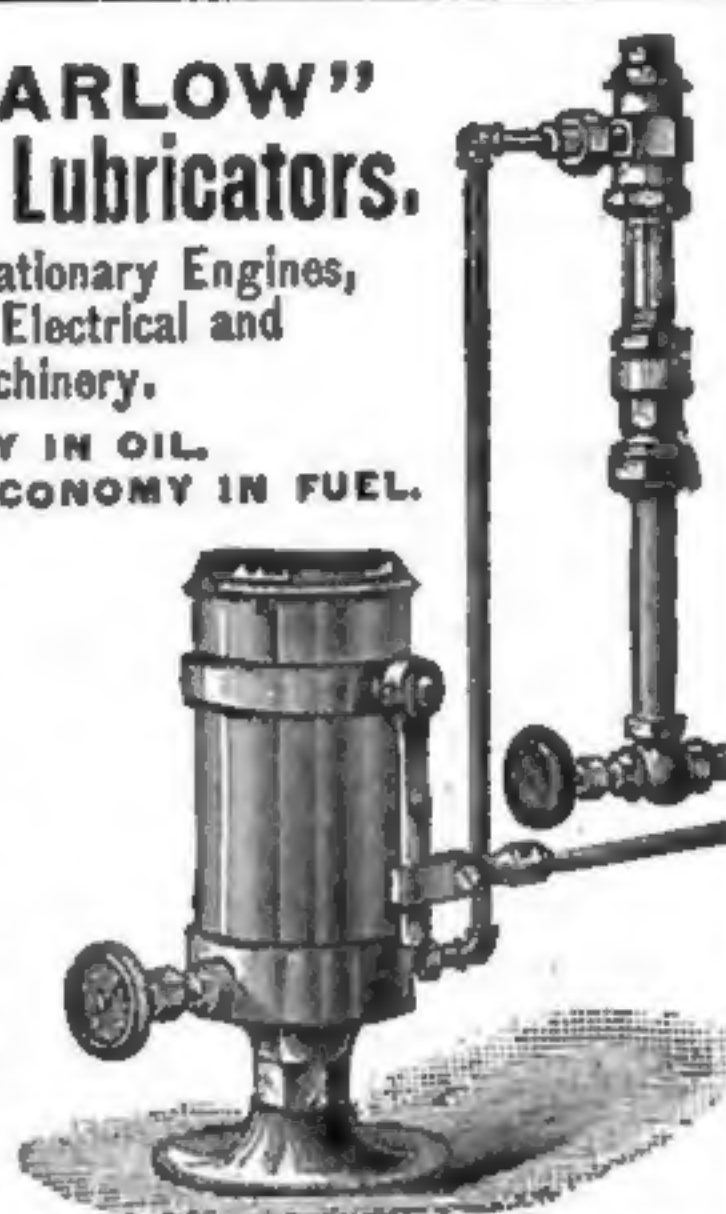
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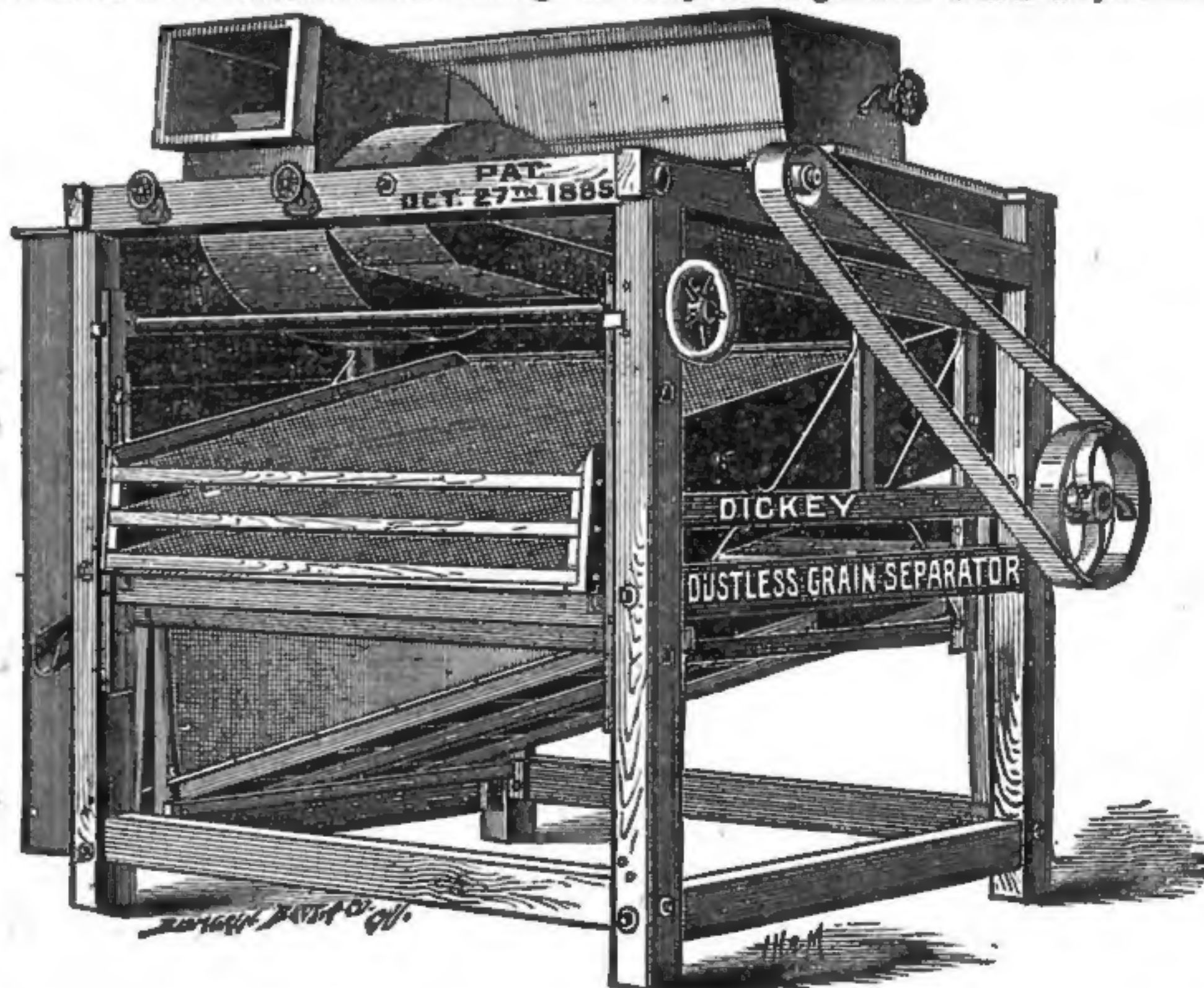
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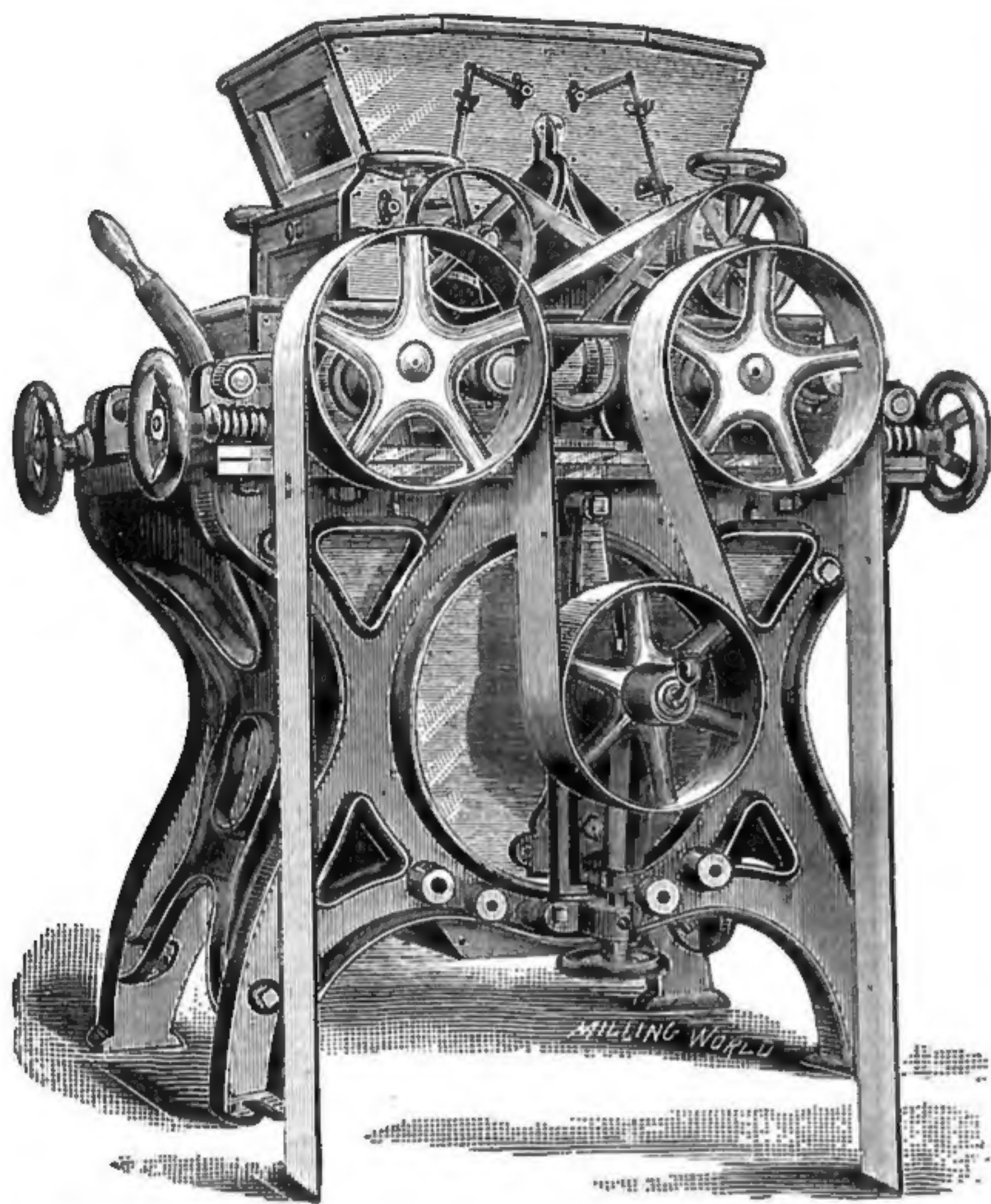


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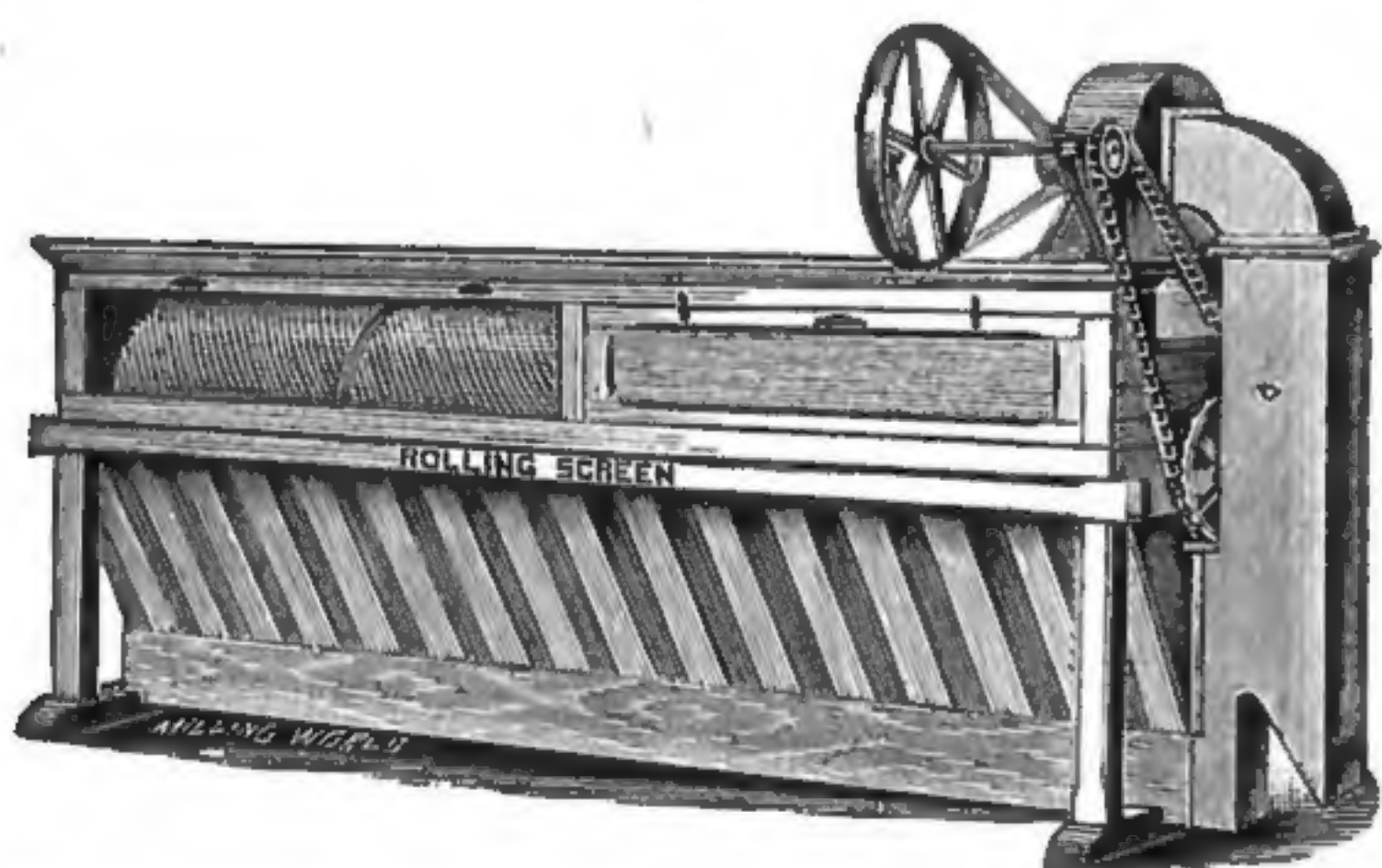
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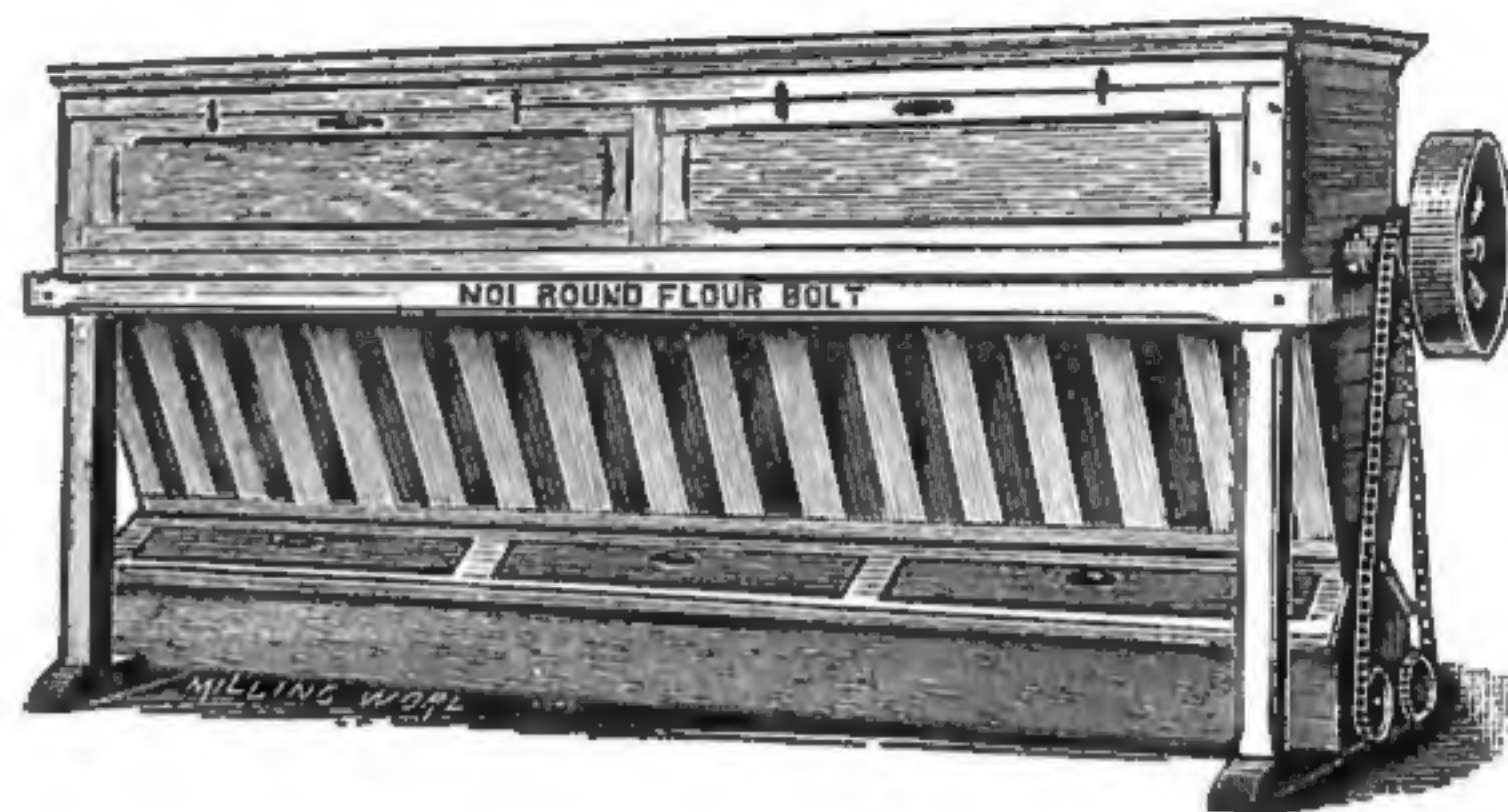
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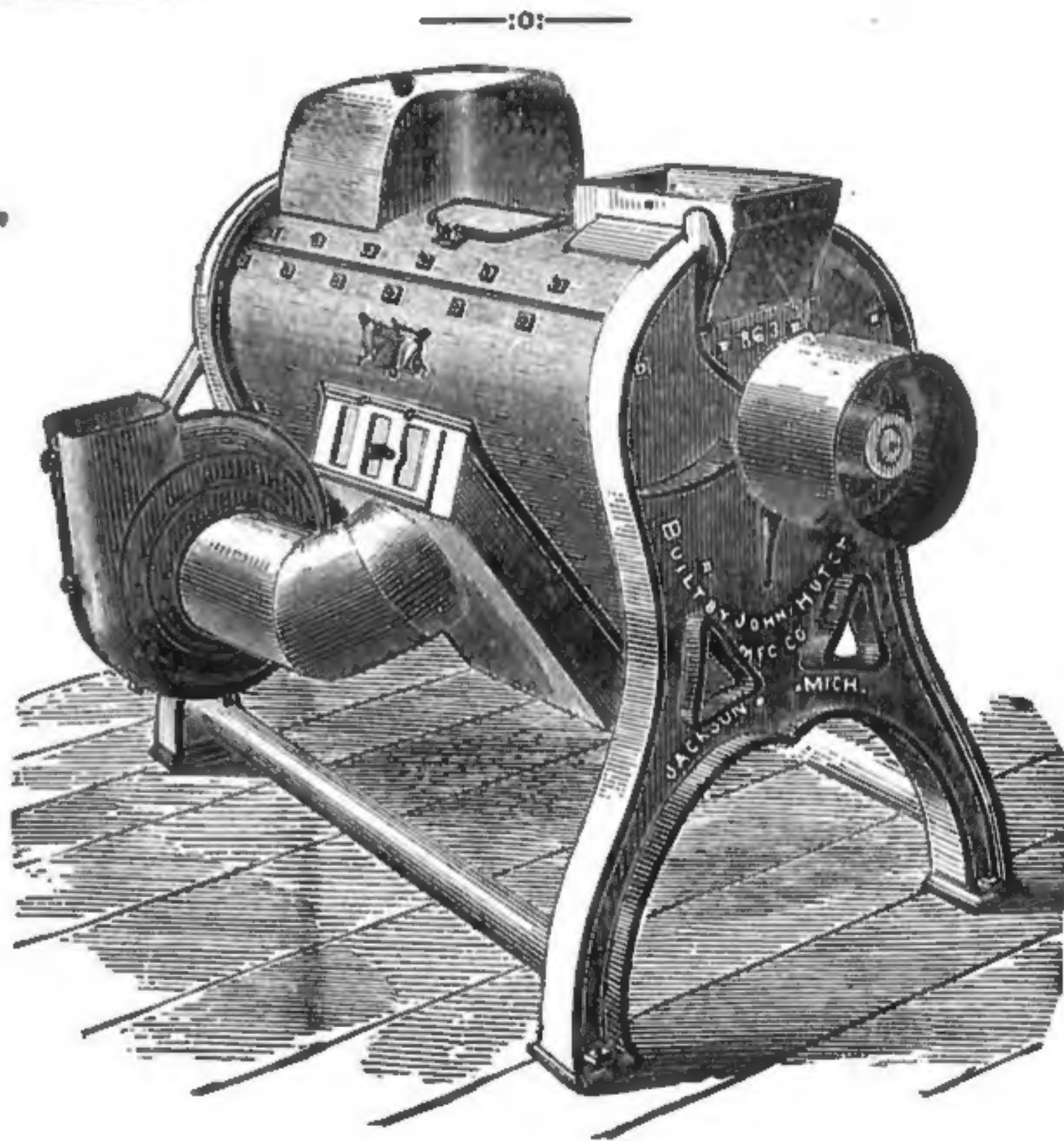


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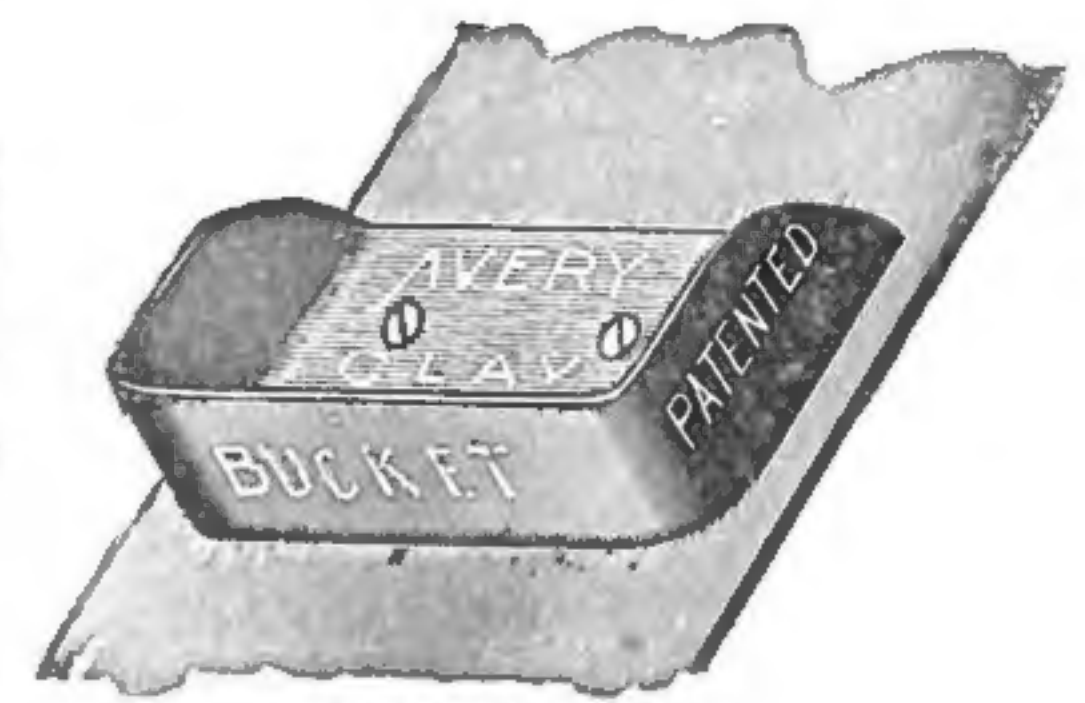
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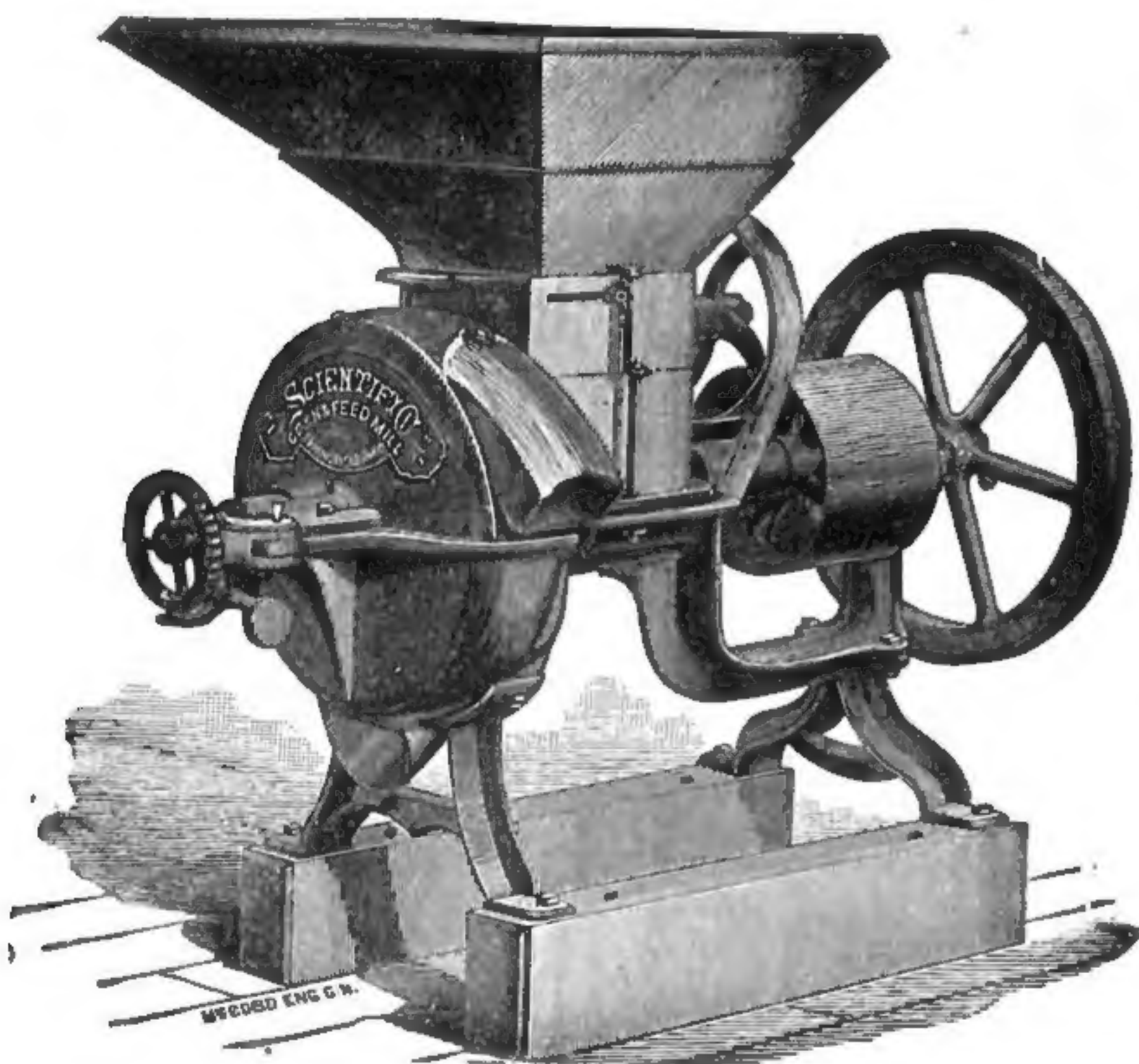
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